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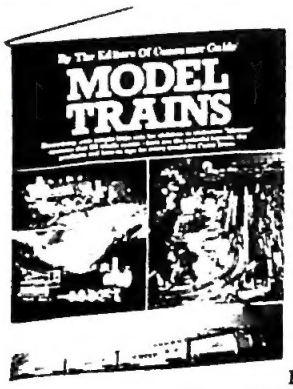


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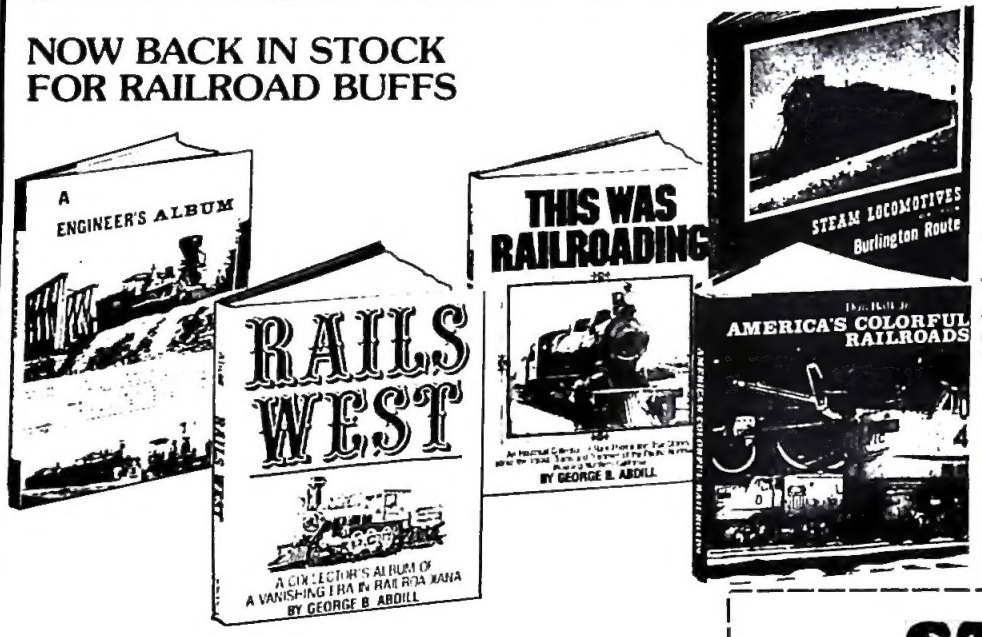


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# RAIL CLASSICS

COVER—Via Rail by Brian C. Nickle

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# On The Rails

**By Ed Stauss**

*THE RAILWAYS* of most other nations have been nationalized for years and some people fear that our railways will go the same way, progressing in a wave of nationalization from east to west. Mr. John Fishwick, president of the Norfolk & Western Railway, thinks there is another way to go. He has a very interesting proposal for Conrail lines east of Buffalo and Harrisburg.

Because Conrail has received aid of $4 billion for which there is little prospect of repayment, why not take back our $4 billion in goods rather than money. Let those goods be the tracks and right-of-way of Conrail's eastern lines. Conrail could keep all their rolling stock, but the government would own the track.

Conrail, as well as other major lines connecting to the government tracks, could be given nonexclusive trackage rights to conduct operations over such lines. Similar rights could be given to the D&H, B&M, and perhaps others.

In short, the government would make available rights-of-way in the Northeast just as it makes highways available all over the country. The user railroads would pay a charge, perhaps measured by car miles or by a percentage of revenues. Instead of the Conrail monopoly we now have in many areas, competition would exist to whatever degree the traffic would support.

In the event none of the carriers were willing to provide service on a particular line, the line could be abandoned. If a shipper objected to abandonment, they or others could operate a short line to connect with one of the trunk line carriers.

There's no guarantee that this plan would be self-sustaining and so there is still the possibility that the government's track might still require a subsidy. The concept would limit the government's participation to that of a supplier of track as it already supplies waterways, airways, and highways. If the new trackless Conrail still floundered, other competitors could easily rush in with a more efficient operation on Uncle Sam's rails. Mr. Fishwick's idea is one I'd like to see tried.

*CONRAIL* reported a loss of $48.5 million for the fourth quarter of 1979, compared with a $60 million loss for the same period in 1978. Conrail's improved performance in 1979 is particularly significant because it came despite less favorable economic conditions than those which prevailed in the fourth quarter of 1978 according to Edward G. Jordan, chairman and chief executive officer.

* * *

*FREIGHT TRAFFIC* on U.S. railroads during 1979 totaled an estimated 902 billion ton-miles, record high which is 5.2 percent above the previous record in 1978, reported the Association of American Railroads. Biggest percent gain was in the East while the gain was lowest in the South.

* * *

*THE BANGOR & AROOSTOOK RAILROAD* has retired its fleet of 794 potato cars ending 85 years of hauling Aroostook County potatoes to the rest of the nation. The potato empire that was built by the B&A's service now sends its crop via trucks which have been offering faster, cheaper service.

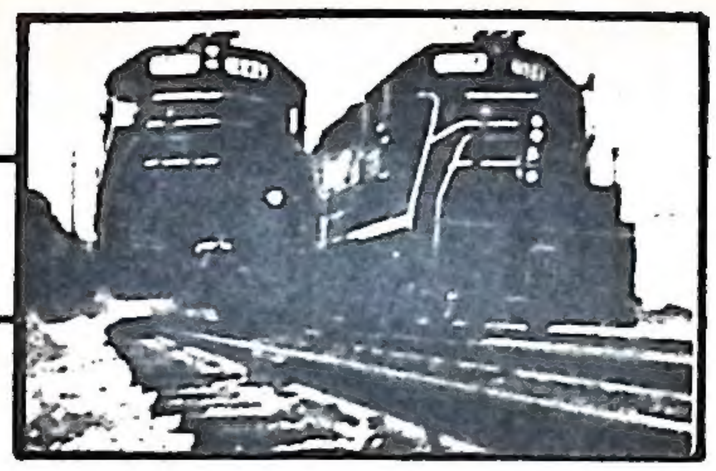
* * *

*LAST YEAR* 57,504 revenue passengers rode behind *Southern Railway's* steam excursions and 1980 should also be a good year with activities which began on March 22 and extending through November 16. The active fleet of engines now stands at three — No. 722, No. 2839, and No. 4501. For future use, Southern has leased ex-C&O No. 2716 to be restored.

* * *

*MILD WEATHER* in late 1979 allowed the *Northeast Corridor Improvement Program* to get slightly ahead of schedule. A total of 160 miles of renewed track is now in service. As a result Amtrak has been able to raise speed limits over major route segments in Massachusetts to 90 mph, greatly improving schedule performance.

* * *



*AN AGREEMENT* has been announced by which *Burlington Northern* will acquire and operate virtually all major shippers and receivers of rail freight presently served by the Milwaukee in Montana and Idaho and significant portions of the Milwaukee's markets in Washington. The agreement includes sale of up to 350 route-miles of track to BN for $21 million.

* * *

*AMTRAK* has announced it is ready and willing to work with local governments to:

—Combine station improvements with local transit for both energy savings and passenger convenience.

—Coordinate station improvements with local redevelopment plans.

—Review train schedules to assure best transfers with other transportation modes.

Other cooperative features of Amtrak's new program include shared use of station and parking facilities to benefit both Amtrak and the local community.

* * *

*AFTER OPERATING* the *Crescent* for over a year, Amtrak has shortened the southbound schedule 45 minutes by eliminating switching operations in Washington. Lounge and dining cars as well as sleepers and coaches are placed on the train in New York for the complete 1378-mile run through to Atlanta and New Orleans.

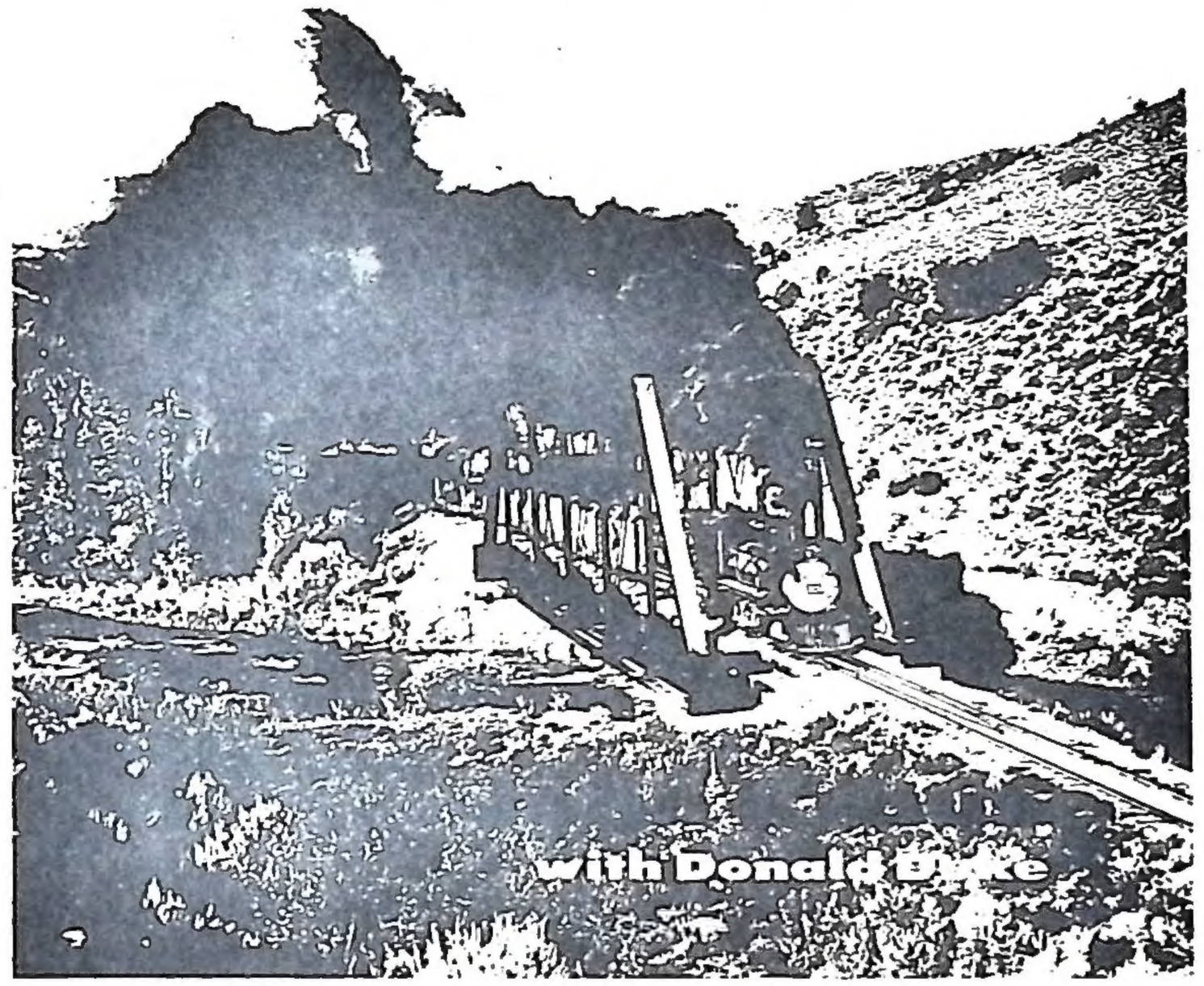
* * *

*SHOWERS* are being tested in deluxe bedrooms of one of the Superliner cars used in Chicago-Seattle service. Amtrak will analyze data and passenger comment before deciding to install showers in additional cars.

* * *

*AMTRAK COMPLETED* its third straight year in 1979 without a single accident-related passenger fatality aboard its trains. During those three years 60 million passengers traveled Amtrak. *(Continued on page 72)*


# AMERICAN NARROW GAUGE




*American Narrow Gauge* is a luxurious pictorial account of the narrow-gauge lines still in operation following World War II. This volume surveys the common carrier lines, the private and logging pikes, from Pennsylvania to Alaska, and from wartime to current date. Such carriers as the narrow-gauge lines of the Denver & Rio Grande Western, East Broad Top, Railway, Rio Grande Southern, Southern Pacific, Sumpter Valley, West Side Lumber Co., and the White Pass & Yukon to name but a few are presented here.

This book of superb photographs expertly integrated into a sparkling text fires the imagination of those who remember the small steam locomotives that climbed Marshall Pass or the *Galloping Goose* that used to clatter over Ophir trestle. Here is the *American Narrow Gauge* — the last slice of it — and served up in easy-to-read style with a matchless picture collection of slim gauge railroading. **24.95**

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# Train Titles

**The Old Patagonian Express** by Paul Theroux, published by Houghton Mifflin Company. 404 pages, 6"x9", hard cover, $11.95.

You might ask how Paul Theroux could be considered a rail fan if he traveled by train from Boston to Argentina without taking a camera. The answer is simple. Undistracted by the manipulation and technology of photography, Theroux could put his full effort into enjoying the ride.

This book is a kind of back-to-basics experience in rail fanning where we learn again why we are rail fans. He doesn't trouble us with railway statistics; he describes the human side of rail travel including the joy of fast, comfortable trains and the agony of slow, dirty trains. Theroux edits out the routine experiences, but lets us in on his feelings about travel — the joy of departure, the relief of arrival—and lets us meet some of the people he meets during his journey.

For the record, it's not really possible to travel entirely by train from Boston to Patagonia. Air and bus bridges were used when necessary, but train travel was clearly the reason for the trip as proven by the patience he showed in waiting for the steam-hauled train that was the last link in his Odyssey.

Theroux's first rail book, **The Great Railway Bazaar,** became a best seller and this one should do as well. I enjoyed every page and the book ended too soon like the good train in Theroux's maxim, ". . . no good train ever goes far enough, just as no bad train ever reaches its destination soon enough." EGS

**Chesapeake & Ohio H7 Series,** by Thomas W. Dixon, Jr., published by N. J. International, Inc., 22 West Nicholai Street, Hicksville, NY 11801. 54 pages, 8" x 10.5", soft cover, $6.75.

Like the book we're reviewing, C&O's articulated H7 and H7a locomotives were far from perfect yet they got the job done. The locomotives, in service between 1924 and 1952, did not particularly distinguish themselves, but our author, who lived near the C&O tracks in West Virginia, took on the task of researching and reporting their career.

One wonders why the C&O kept these inefficient 2-8-8-2's in service for as long as 28 years. During their career some were sold to other operators who quickly found them suitable only for scrapping. Three were sold to the Richmond, Fredericksburg & Potomac Railroad in 1943 who scrapped them six years later. The Union Pacific reached its conclusion even faster, scrapping in only two years the thirty it bought from C&O in 1945. But the C&O stubbornly kept eleven of the dogs until 1952.

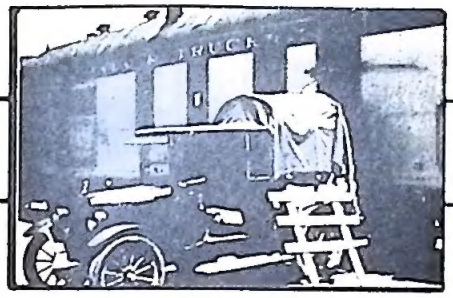
According to the author, the H7 bridged "...the gap between the era of the drag freight and the modern era of speed..." Based on evidence presented in the book, this new era of speed was still under 20 mpn while he lets us guess at the speeds of the older drag freights.

The H7 built by Alco was so inefficient that it would run out of coal before the end of a long run. The C&O relieved that problem when it ordered twenty similar locomotives from Baldwin, designated the H7a, by putting on a larger tender. Other mechanical problems which surfaced during later years included hot running of the fifth driver (counting from the front), failures of a major weld on the boiler and cracking of the relatively light frames.

These were the first engines with the characteristic C&O "flying pump" faces in which the feedwater heater and pumps were placed in front of the smoke box in order to expand the boiler to the tunnel clearance limits.

The book has two excellent color illustrations and many black and white in-service photos as well as a detailed, poster-size sheet with an O-scale drawing with several section views. This drawing has a serious error in its label, designating the builder of the 1926 H7a models in large letters as "ALCO" whereas the book indicates the 1926 order was built by Baldwin.

The clumsily-written and organized text seems to tell the story although some sentences would be easier to read if missing commas were inserted and spelling errors corrected. EGS



# Rail Mail

### RPOs Survive

Came across this slide of an obviously in-use RPO in Bangkok, Thailand. Judging by the photo, not only are other countries not phasing out RPOs to the extent we in the U.S. did, but also the public seemed to be aware of their existence.

George W. Hamlin
Spring, Texas

### Indiana Industrials

I immediately picked up a copy of the January issue of *Rail Classics* when I saw the cover title of "Industrial Power in Indiana." I know of several shortline and industrial operations in Indiana, and I thought that *RC* could give me a complete rundown of the lines, and that I would probably read about a few I didn't know about. However, when I read through the issue I found nothing about Indiana shortlines, but rather Illinois industrials and shortlines. I was just as pleased at this discovery, and give my praise to Bill Wylde for an excellent study of this southern Illinois area that can at times offer the railfan a highly enjoyable but hard to locate area of rare power. I'm just sorry that this article didn't appear earlier when I was down in this area as I missed more than half of the lines down there. However, the article has inspired me to plan a trip in the near future to that area.

I would like to say that Precision National Corp. in Mt. Vernon can be a railfan's heaven at times, as inside are quite a few rare units. Tours for large groups are available at times (at least they were last year), and it presents the chance to get pictures of many units that you will probably never see again.

Please keep up the excellent work in covering today's railfanning scene as I await anxiously for your next railfanning article.

George Dobey
Villa Park, Illinois

### Ft. Worth Map

Re: the Don Sims article, "Railroading in Ft. Worth" (March 1980 *RC*), this was somewhat of a disappointment. It would have been greatly improved with the inclusion of a better map that would show the various yards, crossings and other rail spots.

Daniel S. Murph, Jr.
Ft. Worth, Texas

The map accompanying your Ft. Worth article contains many errors. Among other errors, all references to the Cotton Belt are wrong. All of this track is of the parent Southern Pacific. Rock Island's terminal is in the northeast section of the city, not the northwest. Enclosed is a map of the area, showing the rail lines and the major yards.

Joseph Henry, Jr.
Ft. Worth, Texas

### Japan Railbuses

I enjoyed the article by William T. Morgan on the Japanese railcars. However, there is one correction, and that is the name of the railroad company. The correct name of the company is *Nanbu Jukan Tetsudo*. "Nanbu" is the name of the district, "jukan" means "running through," and "tetsudo" means railroad.

Other than the Nanbu RR, the Japanese National Railways (JNR) had 49 railcars. These cars were based on the West German "Schiene-Omnibus." In August 1954, the JNR ordered four of these railbuses from the Tokyu Rollingstock Company in Yokohama as a trial. These were KIHA 01-1 to KIHA 01-4 types. The next year, an additional eight cars were ordered with minor modifications and an increase in capacity from 40 passengers to 52. This group was numbered KIHA 01-51 to 01-58. In January 1956, the JNR changed the plan of the cars from two doorways at each end to one doorway on each side. The Tokyu factory made 17 of these numbered KIHA 02-1 to 02-17. These 29 cars were assigned to local lines in Honshu, Shikoku, and Kyushu. In September of that year, another 20 were constructed of the one doorway type KIHA 02. Minor changes included a slight increase in power, double glass windows and a heating system as all these cars were allocated to snowy Hokkaido. This group was KIHA 03-1 to 03-20. One of the KIHA 01-51 class was rebuilt to a mail-baggage car and renumbered as KIYUNI 01-1. But, by 1968, all of these railcars had been scrapped. The Haboro Coalmine and Railway Company ordered one railbus from Fuji Heavy Industry Company, manufacturers of the Nanbu RR railcars. After the mine was closed, this railcar was also scrapped.

Arthur W. Becker
Waianae, Hawaii

# THE LIFE -- AN

*Crossing the Santa Ana River in July of 1976 the consist of the train explains why Southern Pacific felt that abandonment time was near.*

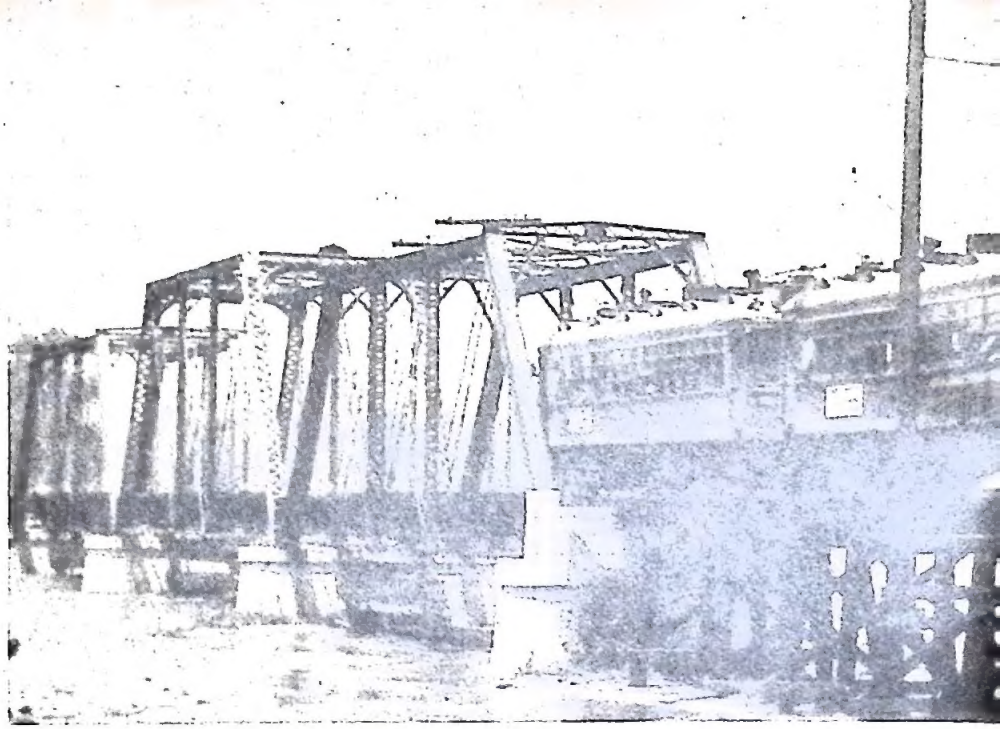
# D DEATH -- OF A LOCAL

**It began as a streetcar line and time finally caught up with it**

By Gary G. Allen

*Photos by the author except as noted*

*In the days of the Pacific Electric, multiple unit trains were common, such as this train crossing the Santa Ana River en route from Los Angeles to San Bernardino.* Craig A. Rasmussen



One of the more bucolic branches of the ever shrinking network of former Pacific Electric lines in Southern California now operated by Southern Pacific has been abandoned. In the summer of 1978 SP applied for permission to discontinue service over 7.4 miles of the San Bernardino Branch from the Santa Fe interchange in San Bernardino east to North Redlands. Norton Air Force Base, mainstay of this portion of the line was ending its railroad operations within the Base, and an occasional reefer of oranges from the only other shippers, a couple of small packing sheds at the end of the rustic branch didn't justify its continued use.

Each weekday morning the San Berdoo local went on duty at West Colton, and once it was able to get across the busy yard tracks and mainline, it rumbled off through Colton to San Berdoo for a session of switching warehouses. By the time the local reached the old PE yards and carbarn (now used by a private company) it was time for lunch.

After beans, cars left by Santa Fe's Redlands local were picked up off the interchange just north of the carbarn. If there were cars for Norton AFB, as was often the case, or empty reefers for the packing sheds, the San Berdoo clattered across the Santa Fe branch and swung east onto Rialto Avenue.

For nearly a mile the train slowly moved down the single track in the center of the street, dutifully complying with "TRAIN STOP" signs only recently placed at busy intersections. After a safety stop at Waterman Avenue the local entered private right-of-way and the engineer notched back on the power of the day, usually an SW1500.

Cutting southeast across the fields, the train crossed, then paralleled palm tree lined Mill Street to Norton AFB. Here the crew unlocked the gate and spotted cars inside the Base, to be switched later by the Air Force's own engine. Outbound cars were left on the spur while the train continued its eastward trek with a reefer or two in tow. Frequently the clickity-clack of the short train was drowned out by the roar of a heavy jet landing as the San Berdoo passed near the end of the runway.

The long wood and steel trestle that spanned the Santa Ana River was crossed just before the local passed a seldom used spur leading into a Edison operating station. Once across San Bernardino Avenue, which it would parallel to the end of the branch, the line's in-

*Five years after interurban service ended on the branch, the summer of 1941 saw a railfan trip from LA to the end of the line at Sunkist. Electric locomotives still handled freight service on this line then.* Craig A. Rasmussen

*The San Berdoo local, with SW1500 #2457 as the power, switches at Crown Jewell. The track was in keeping with a little used branch.*

terurban heritage was quite visible.

Most of the crossbucks carried the name PACIFIC ELECTRIC in bold black letters, and many roads were protected by old wig-wags, a highway crossing signal invented by PE, A short distance beyond the Edison plant the line passed an old wood farmhouse and barn that marked the site of Marigold, a siding that existed years ago for trolley meets. Although the Red Cars stopped using this line over forty-two years ago, the station name of Marigold was carried in employee's timetables through 1978.

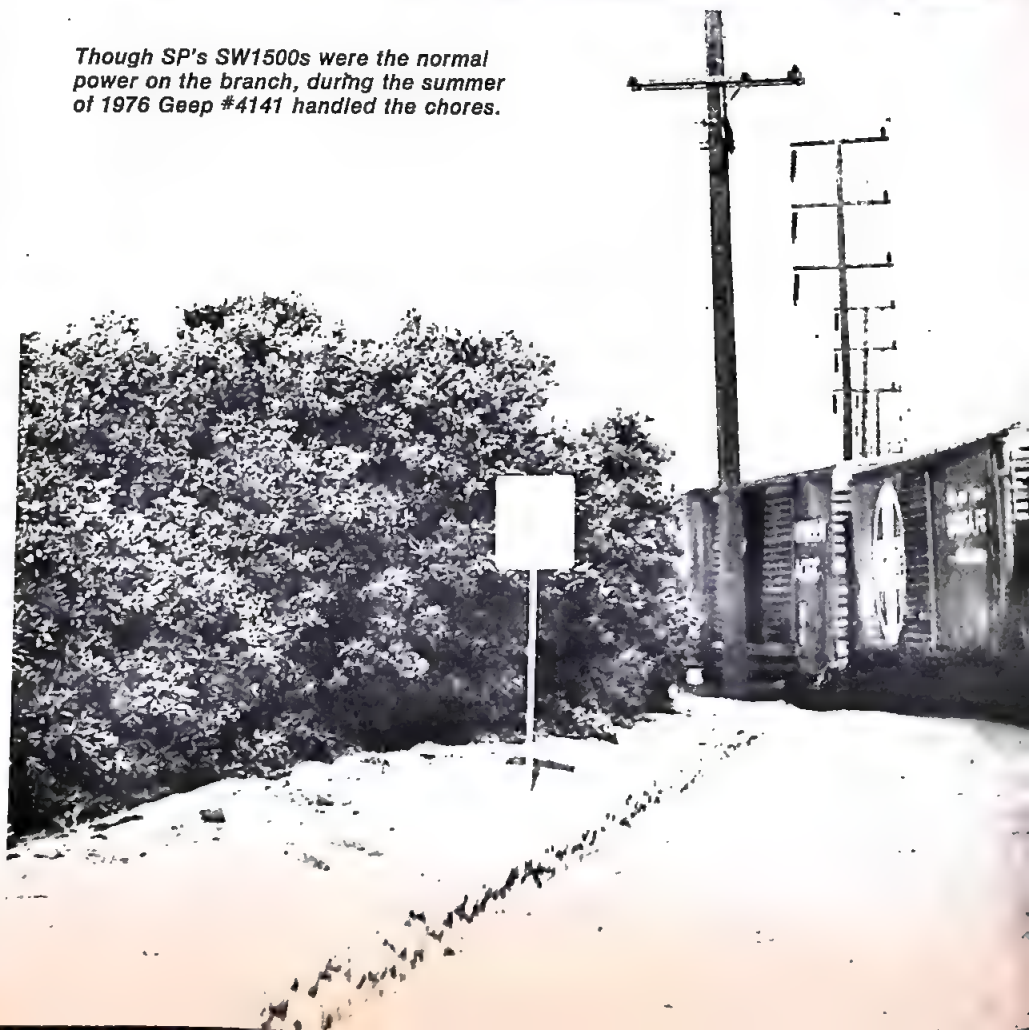
Continuing east, the San Berdoo passed rows of orange groves lined with tall palms along the roadside track, the air fragrant with the sweet odor of their blossoms. On a rare winter day when it was crystal clear you could see the snow capped San Bernardino Mountains that formed a backdrop to a scene the chamber of commerce once pictured as being typical of Southern California. Watching the SW1500 lead its short train through this area one could not help but imagine what it must have been like if you could turn the clock back to a less hectic time and ride a Red Car along this bucolic branch.

At Crown Jewell the train passed an old Sunkist packing shed now operated by United Southern Citrus Growers. Due to the alignment of the stub-end spur the shed had to be switched on the return trip. Even if there were no cars beyond this point the local had to continue another mile to the end of the branch where the engine could run around its train. For the last half-mile the track ran down the middle of the farm road through the orange groves to Sunkist's packing shed which is run by Blue Goose Growers.

Known as Sunkist until SP renamed the station North Redlands after its 1965 take-over of all PE operations, this was the eastern most terminal on the Pacific Electric since 1936. Just past the shed at the end of track tank cars full of fuel oil were once spotted for use in smudge pots to heat the orange groves during sub-freezing winter nights. When the Red Cars used this line the track continued a short distance then swung south on Orange Street to the terminal at Citrus Avenue in downtown Redlands.

The San Berdoo branch, or Redlands branch as PE called it after passenger service ended, got its start back in 1902-03 when the San Bernardino Valley Traction Company constructed the line from Redlands to San Bernardino. In 1907 traction tycoon Henry E. Hunt-

*Though SP's SW1500s were the normal power on the branch, during the summer of 1976 Geep #4141 handled the chores.*



4141
4141

*Businesses and residential structures provided the border for much of the street running on Rialto Avenue in San Bernardino.*

ington acquired SBVT, and it became part of the Pacific Electric in the Great Merger of 1911.

Redlands was the easternmost town on the system and for many years PE operated trolleys along city lines acquired from SBVT, but they were unprofitable and the last was abandoned in 1936. In the mid-thirties PE was using center-entrance cars in suburban service between Redlands-San Bernardino-Riverside. Also the big 1200 class interurbans ran through from Los Angeles, a distance of nearly sixty-seven miles, the longest trolley ride in Southern California. Local cars were cared for in a two-stall barn on East Citrus Avenue in Redlands, while the interurbans' needs were attended to at the large San Bernardino shops. Both carbarns are still standing.

Santa Fe and Southern Pacific pretty much had Redlands' freight business sewed up, so when the Red Cars stopped running east of San Bernardino on July 20, 1936, the line was cut back 2.07 miles to Sunkist. A few railfan outings brought interurbans to Sunkist, but that ended when the line was dieselized in 1945. That year new track was laid east of the carbarn on Rialto Avenue to replace the original trackage on 3rd Street. This trackage was not electrified and diesels replaced the juice hogs on the branch.

In 1941 regular interurban service between Los Angeles and San Bernardino ended. Ten years later all electric freight operations at San Bernardino ceased and the carbarn was modified to service diesel engines. After the 1965 merger of PE into SP the base of operations was moved to Colton and the carbarn became surplus property.

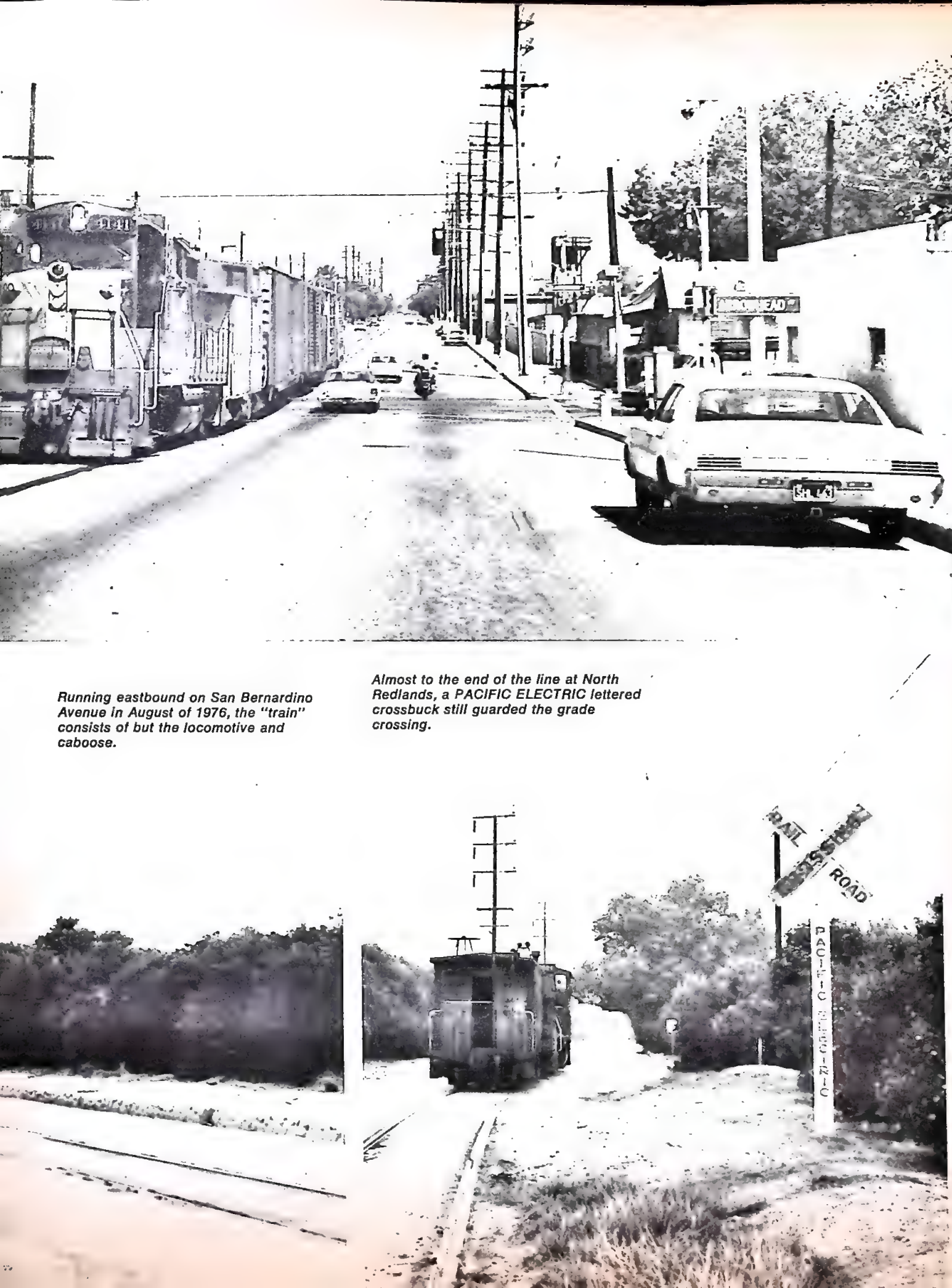
Norton AFB, built during World War II, added considerable revenue to the branch, but by the early seventies business from the Base and packing sheds had declined drastically. So when the Air Force stopped using the railroad SP promptly applied for and was granted permission to abandon the line effective November 8, 1978.

* * *

As of 1980 all that remains of the PE in the San Bernardino area is 2.08 miles of the branch from Colton through industrial and business districts, ending at the Santa Fe interchange. Not very picturesque but profitable. While it's sad to see the passing of the bucolic portion of the San Berdoo branch, a local meandering over a line with more memories than revenue doesn't pay the bills.

*Running eastbound on San Bernardino Avenue in August of 1976, the "train" consists of but the locomotive and caboose.*

*Almost to the end of the line at North Redlands, a PACIFIC ELECTRIC lettered crossbuck still guarded the grade crossing.*



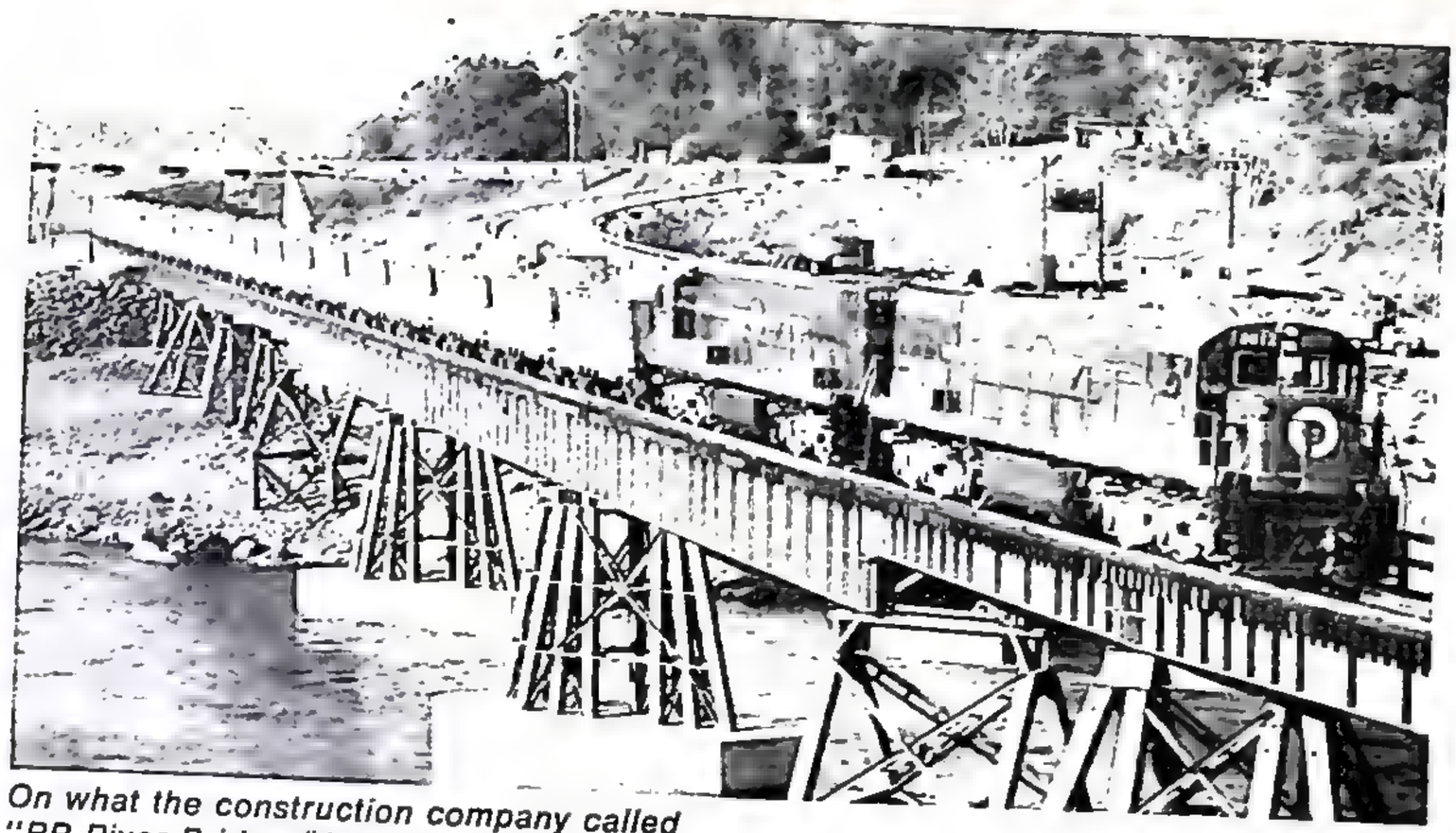
*Below the fish hatchery area opposite Oroville, a trainload of empties glides downhill to be reloaded in a production line like cycle that carried fill to the dam.*

# THAT DAM RAILROAD

## A single purpose line that did its job well and then vanished

By Don Sims

*Photos by the author*



*On what the construction company called "RR River Bridge #2" an upbound train heads for the dam site with its load of fill.*

*Bridge #3 is being crossed at the site of the lower area fish hatchery. The U25Cs were the first of their class to be manufactured by GE and eventually wound up on the Northern Pacific.*

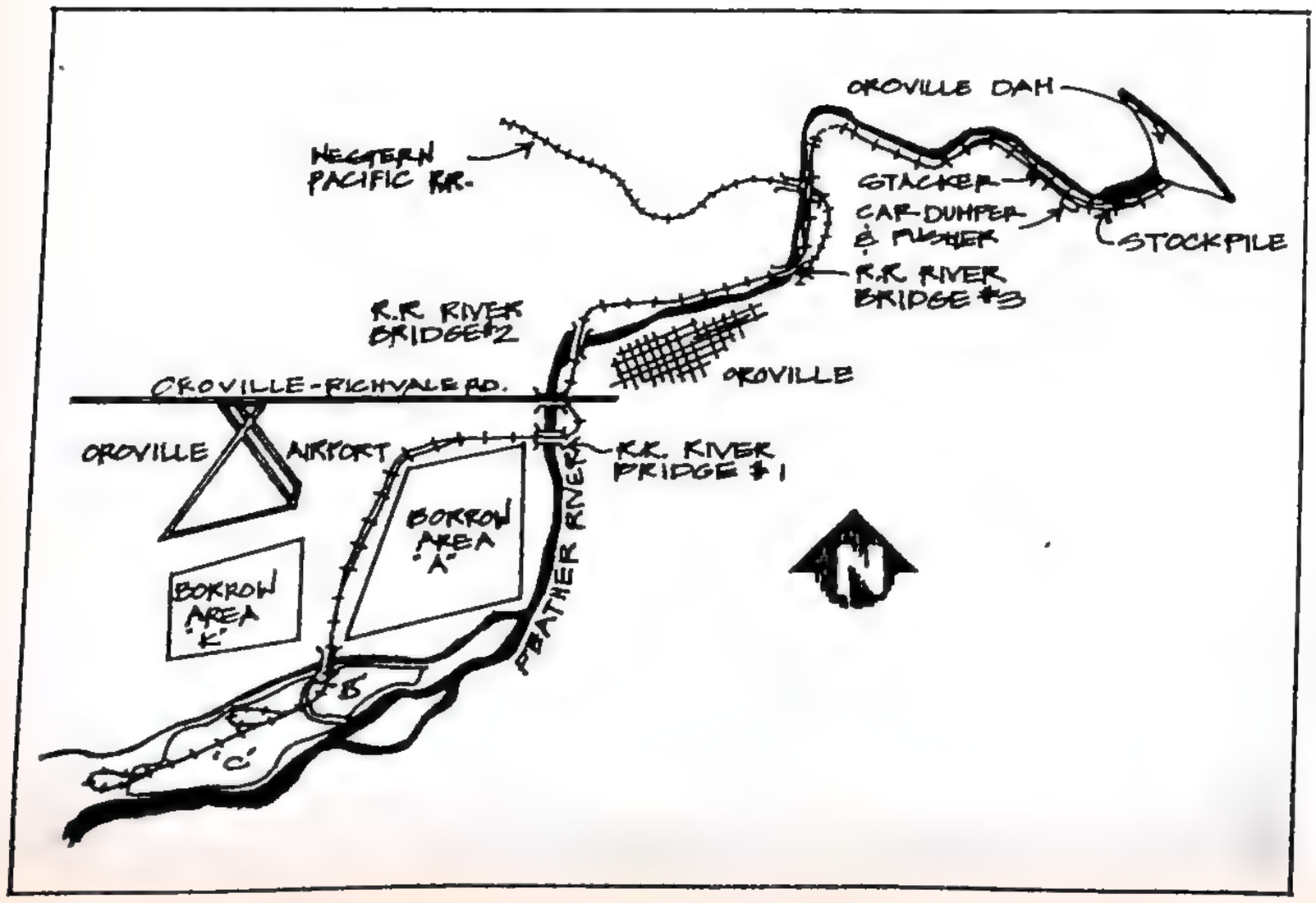
According to its owners it was a "material haulage system" but most people would probably recognize it better if it were called what it really was, a "railroad." And it was quite a special one too, as well as being short lived, for its sole purpose in being was to haul 77 million cubic yards of fill material to form 735-foot-high Oroville Dam in California. The railroad lasted from Fall, 1963 through early 1968 then folded, though hardly as a petitioner in bankruptcy, for it had done its job well, toting that monstrous amount of fill over twelve miles of roadbed and living up to its promises, save for one tragic moment.

Oro Dam Constructors was the name of the outfit that owned the railroad, a consortium of eight contracting firms who pooled their talents and resources to construct the great dam and to create the railroad which moved huge volumes of fill from one end to the other.

Before the dam building railroad was opened for business an earlier railroading event took place, the rerouting of Western Pacific's track north of Oroville over a new line, for the original single tracket path ran right through the canyon where the dam's girth was to be formed. This route change involved a $40 million, 23-mile-long relocation which runs west of the original steel while encompassing a maximum grade of 1 percent which was only achieved in the mountainous terrain involved by way of deep cuts, meandering curves and five tunnels, including one of 8,830 ft. When, finally, WP trains began their operations over the new roadbed the way was open for the Oro-Dam Railroad, as it came to be called.

The privately built hauling system spanned twelve miles of line including, at its upper or dam end, three miles of the old WP main stem. By including a loop at its southern end, plus adjustments for moving a bit as different sources for fill were used, the total became

*Dumping the cars at the dam site . . . unit coal trains today are commonly unloaded in this fashion without uncoupling cars.*

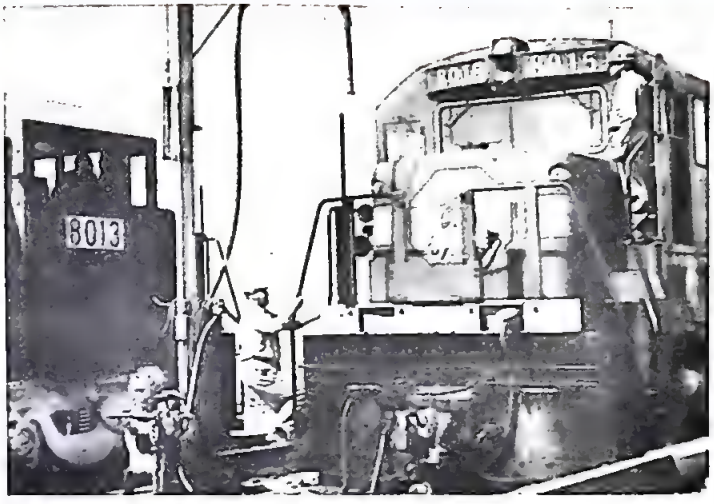



fourteen miles of line and a grand total of twenty miles of trackwork including odds and ends of servicing, storage rail, etc.

Rather than search about for used diesel power — at that point in time, 1963 there probably weren't many big ones available anyway—Oro Dam Constructors opted to purchase seven General Electric U25Cs, then a newly marketed model of which several of the first production run appeared in the dark green livery of the new railroad.

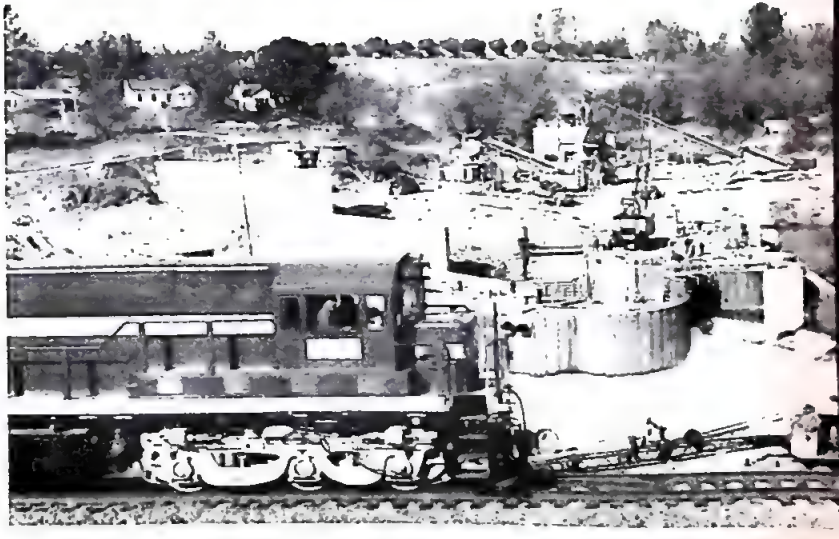
Everything about this operation was first class as new 136 lb. rail was tamped down to go with the diesels and the dirt hauling equipment, 180 ore type cars with solid bottoms and capable of 110 ton capacity. Though operations started off slowly they eventually built up to the designed pattern which was three sets of two-unit U25Cs hauling cuts of 42 cars each. There were four sets of cars with 12 cars providing spare capacity and after a few months the programmed schedule of 20 hours per day was accomplished. This meant that at any particular point you would

*If you didn't know better you could easily tell the lead locomotive probably belonged to a construction company. It sort of has that grimy look.*




*The Oro Dam Constructors was a consortium put together by several major building firms to erect Oroville Dam and it had its own logo which was placed on the U25C's nose.*

*Loading the train downriver below Oroville. It moved slowly through a huge pile of material and cars were filled in a few seconds.*



*A train running by the fish hatchery area. So accustomed have construction workers become to trains they don't bother to look up when one glides by.*

see a loaded train every twenty minutes, the whole operation keyed to delivering 10,000 tons per hour of operation to the dam site.

To go with its twelve miles of essentially main stem the owners included three sidings, two of which, along with a tunnel, were on the ex-Western Pacific roadbed while a third was in the area near the pickup site downriver from the town of Oroville. Train movement was controlled by a CTC installation and as with all such installations was supposed to be foolproof when it came to preventing accidents of the sort known as "corn-field meets."

Something did go wrong, however, and it led to a disastrous consequence.

It was early evening, October 7, 1965, when two Oro Dam RR trains met head-on just outside the western entrance to the sole tunnel on the railroad, a holdover from Western Pacific days. A westbound empty run had just come out of the west portal of that tunnel when it slammed into a loaded train heading for the dam site. Locomotives 8010 and 8011 powered the light train while 8016 and 8014 were coupled to the heavily loaded dam bound movement. A siding lay just outside the west tunnel mouth, which should have been open to receive the empties but didn't so that 8016 the leading eastbound prime mover burrowed beneath the 8010 coming west forcing it high whereupon 8016's cab was crushed. Momentum backed by heavier tonnage on the loaded train forced 8010 back into the tunnel opening where both trains came to rest, stopped by the solid portal. Fuel tanks ruptured and fire instantly broke out with both engineers and their helpers killed instantly.

It's not unusual for large dam projects to claim fatalities particularly among construction forces but rarely are railroaders killed, but then the railroad itself was unique in this kind of work.

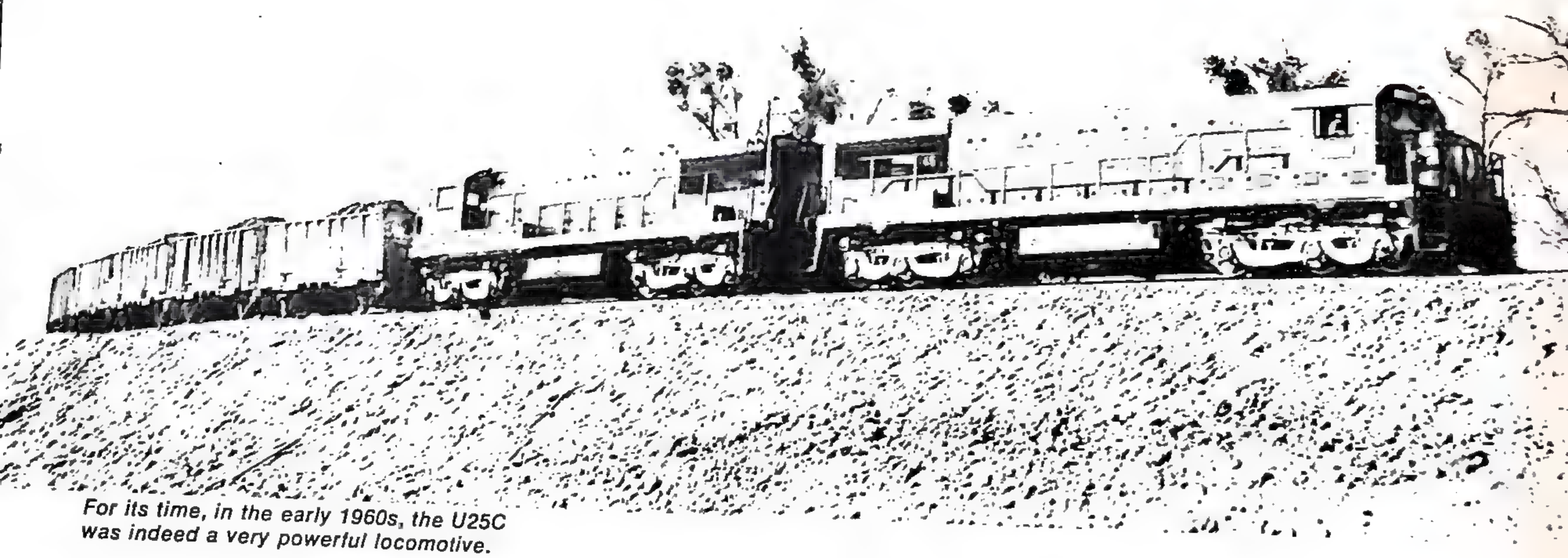
Just below the dam site loaded trains encountered a rotary car dumper and pusher to which loaded trains were directed. Pulling through the dumper, a train automatically uncoupled itself from the cab leaving a 42-car cut to be dumped two cars at a time in rotary fashion, rotating on their couplers. After each dump sequence a push arm would move the train forward to the next two. Actually only 40 cars on each train were loads, the last two being empty but required to allow the pushing mechanism to clear each cut from the dumper, following which the cars would roll by gravity to a spur up ahead, waiting to be picked up and returned for refilling. Of the four car sets three would be working en route while the fourth would be unloading, its diesels already back on the main line

*(Continued on page 70)*

*The locomotive pulls the cars directly through the unloading pit then couples on a string of empties standing upgrade from this location.*

*Detail of the operator's control housing which was responsible for unloading each trainload of fill.*

*The last few hundred yards to the dam was via conveyor belt which ran continuously until the great earthen fill was complete.*



*For its time, in the early 1960s, the U25C was indeed a very powerful locomotive.*

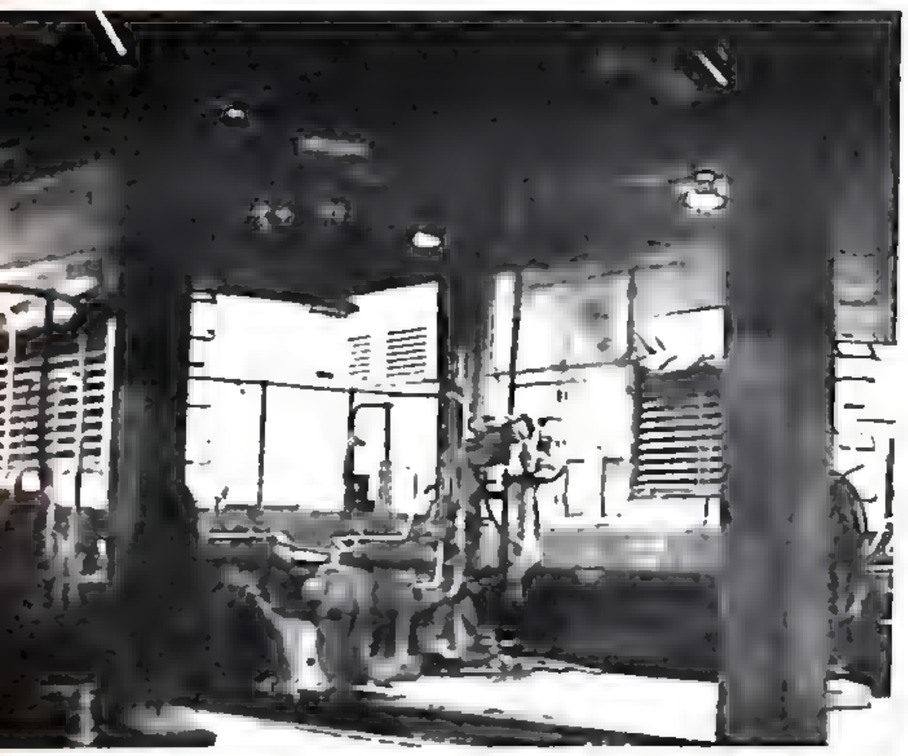
*There was no loop at the dam end, a locomotive unloading would couple onto the empties shown at the right, shove them forward, then leave the cars that had just been unloaded, returning downgrade with the empties.*

*FM #736 shows off its large, roomy cab and attractive overhanging roof. Madison has always been home to these H12-44s and the crews are well versed in the care of the opposed piston prime movers. As a result, the units are in remarkably good condition considering their age.*

Big changes are coming now to the Milwaukee Road, and just how much of the system, and under what conditions, will make it into the decade of the '80s is still uncertain as this is being written.

But one thing that is certain is the short time left for the remaining Fairbanks Morse diesels of the CMStP&P. The last Class 1 railroad to be operating these once numerous diesels, with the cut back in the miles of service it seems fairly obvious that with an excess of power from this route shrinkage, the FMs will probably be among the first of the power to be retired.

On a visit to Madison, Wisconsin, recently, Glenn Oestreich discovered three of the Milwaukee Road's H12-44s in the roundhouse. Since it was a Sunday, none of the switch jobs were working and so the three veterans were resting, waiting for the Monday morning call when they would once again—though for how long is hard to say—go back to work.



*Sunday, October 28, 1979, found three of the FMs, numbers 726, 736 and 753 sitting in the Madison, Wisconsin roundhouse. These are the last Class I FMs in service in the country. Black and white photos by Glenn Oestreich.*

*Some of the orange paint is peeling from the cabs, the steps have a slight droop, and the prime movers have been reworked a number of times, yet these tiny diesel switchers still perform their tasks, much as they have done since being built almost thirty years ago in 1951.*

# FM'S TWILIGHT

**Back in 1972 Fairbanks Morse H12-44 #744 was handling switching chores in Davenport, Iowa. Where once a fleet of more than fifty of these little workhorses could be found on the Milwaukee, those numbers are now down to less than two dozen.** William Clark

RDCs pose at the Westwood, New Jersey, station in November as ribbon cutting ceremonies are conducted.

# RDC RETURN

## Budd's famous cars are once again working out of Hoboken, New Jersey, terminal

Text/photos by M. A. Yurch, Jr.

The interiors of the RDCs have been completely refurbished.

Passenger requests for increased commuter service and the current Conrail power shortage have resurrected five Budd RDC-1 500 series power cars for use on the ex-Erie-Lackawanna Pascack Valley Line. Shown here on a rare Saturday test run at the Washington Avenue crossing in Pearl River, N.Y. are four of the units recently refurbished at the Elibabethport, New Jersep shops. The ex-CNJ units, formerly known as the "Bayonne Scoots," last saw service as Cranford, New Jersey to Bayonne shuttle trains. They were replaced by buses in August 1978.

Four units will be used together and stored at the Woodbine engine yard in Spring Valley, New York, making one trip daily to and from the Hoboken, New Jersey terminal. Notably, four stops on the line will not be served by these faithful Budd standbys: Spring Valley, New York, Nanuet, New York, Pearl River, New York, and the Fairmont Avenue station in New Milford, New Jersey. According to Superintendent of Stations for Conrail's Atlantic region Donald Wallworth, New York stops have been eliminated due to lack of M.T.A. funding.

While the RDCs will run as trains 1601 and 1622 for the foreseeable future, Conrail spokesmen privately wondered how residents close to the Woodbine yard will react to the all night idling required by the Budd units (G.E. U-34CH power currently stored at the yard must be shut down at night in response to numerous noise complaints over the last few years). Should noise problems arise, it is thought that the units would be transferred to service on the ex-Erie-Lackawanna mainline between Suffern, New York and Hoboken.

While regular service by the RDCs began on Monday, December 3, 1979, a special inaugural run between Anderson Street station in Hackensack and a ribbon cutting ceremony at the Westwood station set out on the morning of November 30. Onboard were various state and local dignitaries as well as New Jersey Department of Transportation Commissioner Louis Gambaccinni. A fine time was had by all, and in these days of cutbacks in train service across the country it is good to see officials actually concerned with increasing service. It is also good to see the Budd cars back in service, and it is hoped that they will be with us for a long time.

Rolling through Pearl River, New York, on the Pascack Valley line, the RDCs make a test run prior to the start up of regular service.

357
357

RAIL
ROAD
CROSSING
STOP
ON RED
SIGNAL
357

# THE BRAWNY BESSEMER

**Ore and coal make this a two-way railroad with plenty of trains and profits**

By John Uckley

*Photos by the author*

*Pulling around a severe curve on the outskirts of Conneaut are B&LE #890 (SD38-2 and) #865 (SD38AC).*

There are no frills and florest gracing the title of the Bessemer and Lake Erie Railroad. This is a business company that exists for the sole purpose of performing a tough, dirty job, along its 140-miles of main line trackage stretching between Conneaut, Ohio, and North Bessemer, Pennsylvania. The B&LE transports Keystone State coal northbound and iron ore southbound over a carefully manicured right-of-way.

The Bessemer and Lake Erie Railroad was incorporated in 1900, and is one of the newer Class I railroads in the United States; effectively knitting together a number of earlier Pennsylvania short lines. The Bessemer is controlled by the United States Steel Corporation which also asserts its corporate influences over the Duluth, Missabe and Iron Range R.R. and the Elgin, Joliet and Eastern R.R.

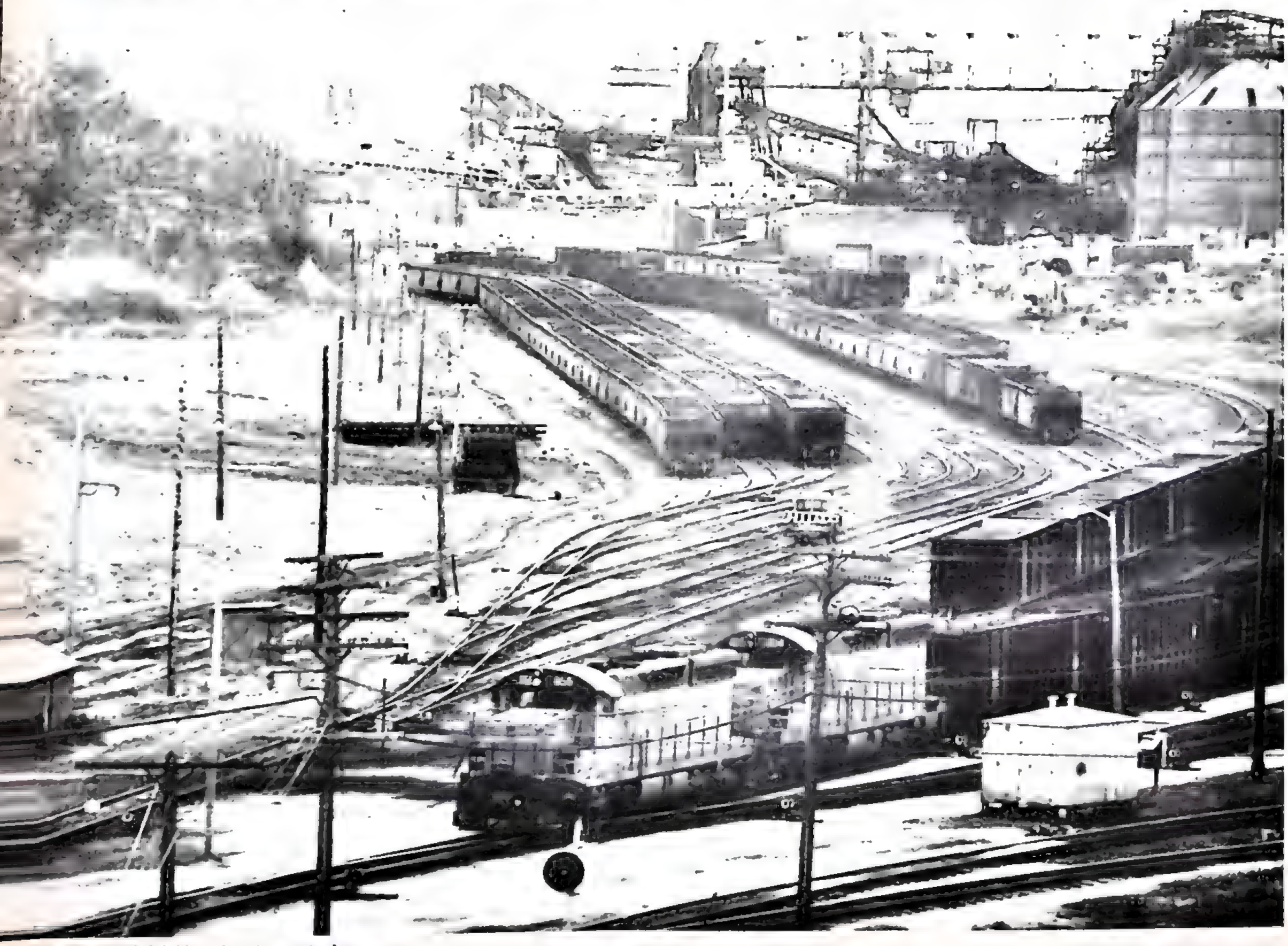
Although the B&LE is primarily an ore and coal carrier, it somehow managed to sustain a respectable passenger service for some five decades after the turn-of-the-century. In 1920 there were 26 passenger trains in operation on the main line and the various branch lines, carrying a total of 1,120,000 people to a variety of destinations within the Keystone State. Train ridership began declining in earnest during the 1930s and 1940s as better roads were developed. World War Two gave a temporary reprieve to this service.

After the war, the Bessemer and Lake Erie Railroad began plying the Pennsylvania Public Service Commission for permission to abandon all passenger train service. The request was denied time after time because the Commission thought the trains were still a viable means of travel in the area. Actually, housewives in Albion and Greenville used to patronize the trains on a regular basis, so that they could venture to the "big city" at Erie for a day of shopping and then return home that same night . . . surely a convenience for the few women who indulged in this practice. Milk cars destined for Pittsburgh were added to the train at Greenville and there was some Express/RPO service as well.

By the time the decade of the 1950s had blossomed into existence, the B&LE passenger train "fleet" had shriveled to a total of eight coaches and RPO/Express cars that were equipped with such nineteenth century amenities as clerestory roofs, olive green plush seats and black walnut woodwork. Power was supplied by a pair of elderly 4-6-2 Pacifics. After 1952, the remaining trains were occasionally pulled by EMD SD7s equipped with steam generators.

Finally, trains No. 1 and 2, operating between Greenville and North Bessemer, were discontinued on May 17, 1952. The Pennsylvania PSC was finally convinced that the whole charade was useless. Trains No. 12 and 13, running between Greenville and Erie, were removed from service on March 15, 1955. The very last B&LE passenger train was made up of one SD7 and three coaches. A large, silent crowd turned out on this particular rainy morning at Greenville depot as the Bessemer brought down the curtain on the remaining vestiges of its once thriving passenger network.

Bessemer & Lake Erie steam locomotives over the years have included Class D-1 2-10-2s, Texas-type 2-10-4s, several 4-6-2 Pacifics, 0-8-0 yard switch-



*A pair of SD18s shunt empty hoppers around the massive ore and coal facilities at Conneaut.*

ers and 2-8-0 Consolidations. The Baldwin Locomotive Works was often the preferred choice when the B&LE went shopping for steam. Later on, the early diesel road switchers were purchased from Baldwin before the company finally succumbed to the siren song of EMD. The Baldwin Texas-type 2-10-4s were always the favorite locomotive of the B&LE operating department, veteran engineers and shop foremen. They all admired their clean, handsome lines and that 109,935 pounds of tractive effort. The last steam locomotives ran on the Bessemer in 1954.

The B&LE purchased an EMD NW2 (No. 286) in 1947. This was really the first diesel of any consequence on the property, although the B&LE had owned a 500 hp light industrial switcher for a brief time in 1936. It was a faint trumpet call that would continue to grow in volume and eventually herald the downfall of steam locomotives on the B&LE.

During 1949, more diesels began to arrive on the scene in the form of 1000 and 1500 hp road switchers from Baldwin. DS-4-4-1000 No. 282 came in 1949. Two DRS-6-6-1500s, Nos. 401 and 402, also joined the fold in 1949. Five more DRS-6-6-1500s, Nos. 403 and 407, were delivered in 1950. The trim Baldwin diesels worked side-by-side with elderly 2-8-4 Consolidations and 0-8-0 switch engines in the classification yards at Greenville and Albion, Pennsylvania. Two final Baldwin six-motor 1600 hp AS-616 road switchers were obtained in 1952.

In 1950, the first of the handsome EMD orange and black F7A/F7B cab-booster sets arrived on the property. This initial EMD road power consisted of seven F7As and seven F7Bs. Subsequent orders of F7As and F7Bs arrived in 1951, 1952 and 1953 to bring the entire cab-booster fleet up to a total strength of 28 F7As (Nos. 701 to 728) and 26 F7Bs (Nos. 701 to 726). These diesels were usually run together on the heavy ore drags as four-unit sets in A-B-B-A formation.

A couple of Alco S-4s (Nos. 291-292) and one EMD SW8 (No. 285) were also purchased in 1951 and 1952 to assist with the various yard chores. Three EMD SD7s came on the scene in 1952 (Nos. 801 to 803), followed by five more of the units in 1953 (Nos. 451 to 455). Two of these units were equipped with steam generators so that they could be used on B&LE passenger trains and U.S. Steel Company inspection trains.

EMD SD9s began to appear on the B&LE system starting in 1956 with the arrival of seven units (Nos. 826 to 832). By this time, most of the steam locomotives had been retired to make way for the hordes of conquering diesels.

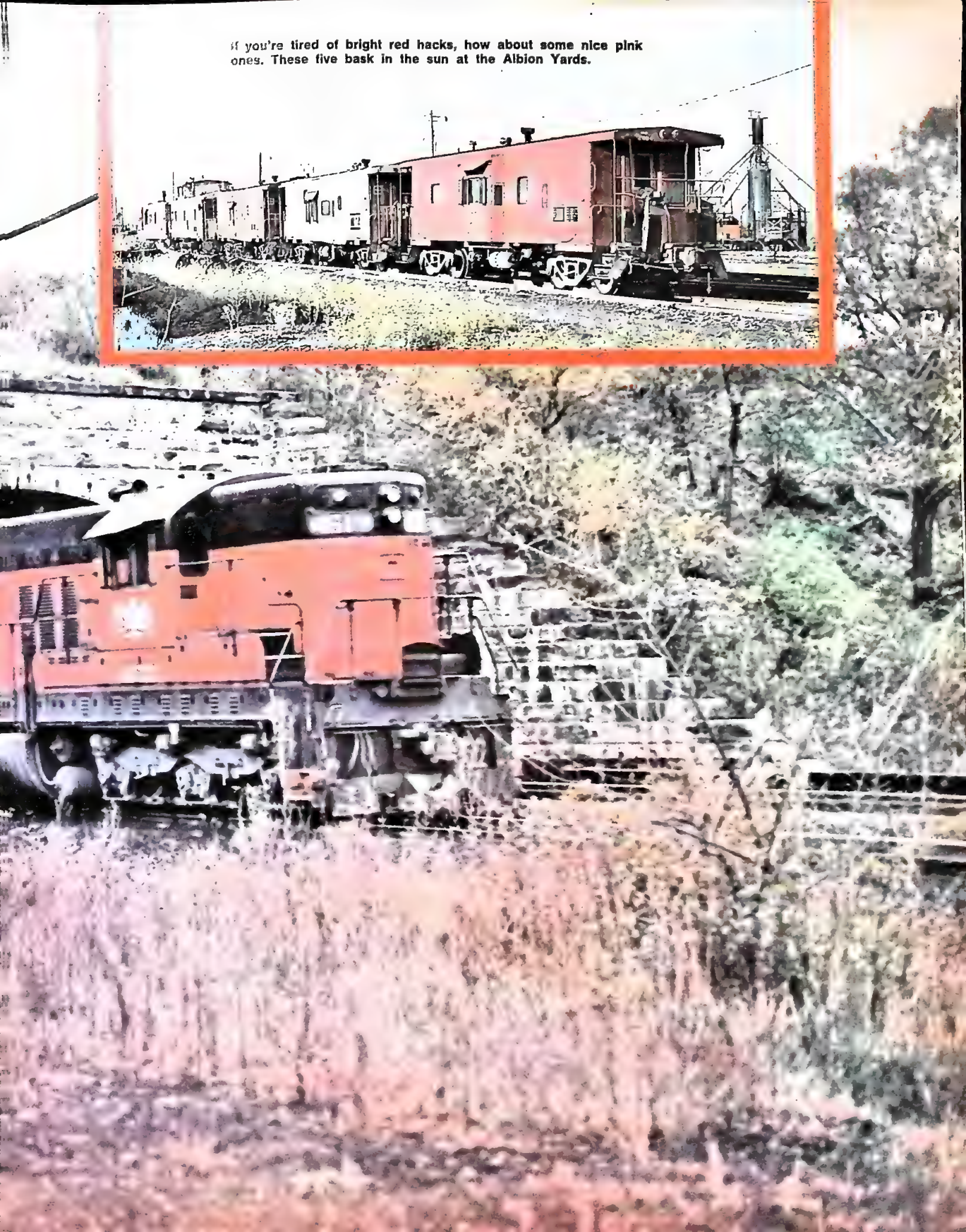
*In addition to the B&LE trains, you should be able to see others, such as this Norfolk & Western freight crossing the B&LE main along Conneaut Creek.*

*Along with an SD7, a pair of yellow and black F7Bs (used as remote controlled "drones" around the docks) await work at the Conneaut engine terminal.*

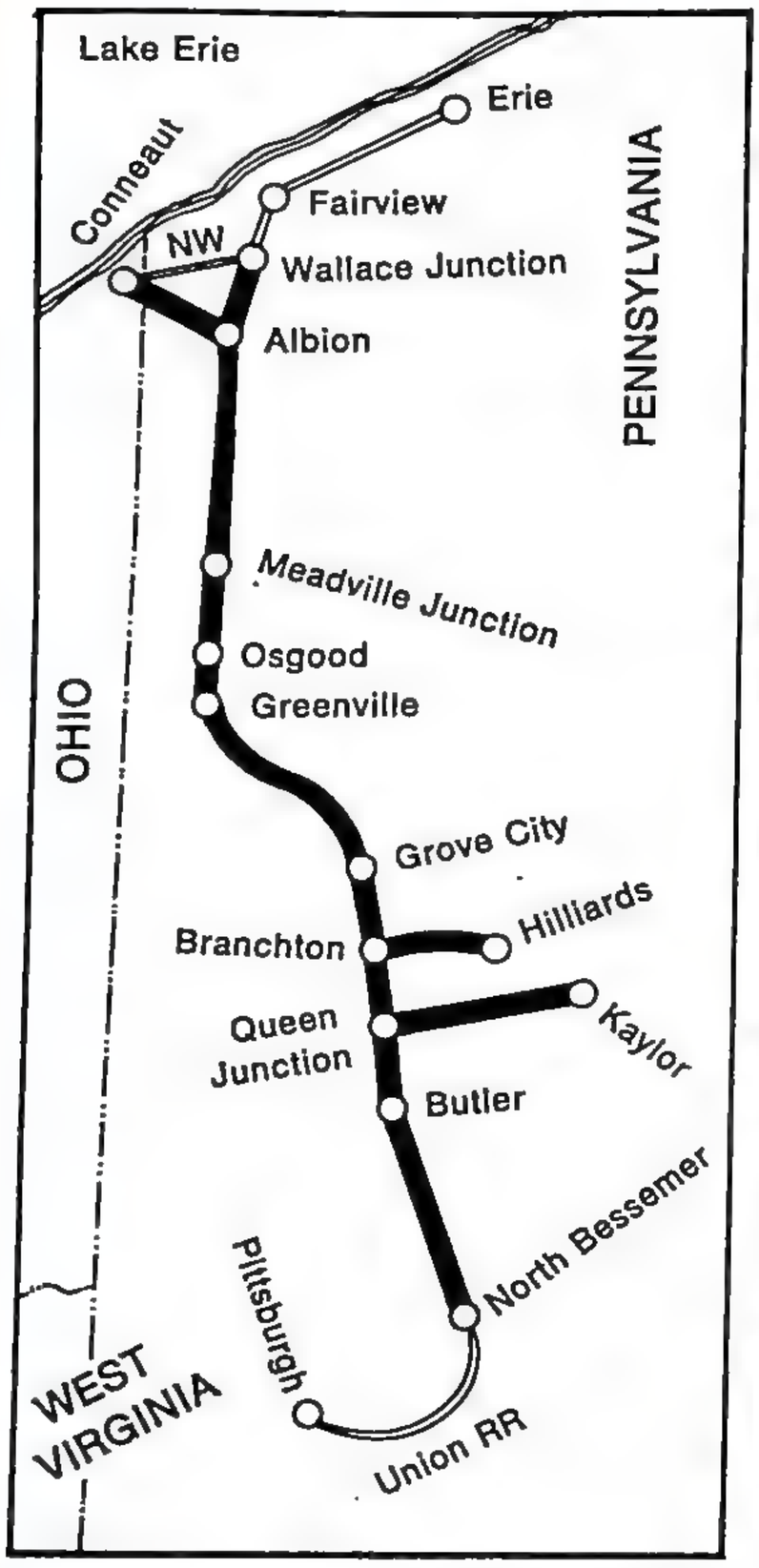
SD7 #451 rumbles through the double track tunnel, passing beneath the Conrail mainline at Conneaut, Ohio.

A large assortment of Bessemer power can usually be seen at the engine terminal at Albion, such as the SD9s.

If you're tired of bright red hacks, how about some nice pink ones. These five bask in the sun at the Albion Yards.



# BESSEMER & LAKE ERIE RAILROAD




Subsequent orders of SD9s materialized in 1957 (Nos. 833 to 837) and in 1958 (Nos. 821 to 825 and Nos. 838 to 840). At this time, some of the early Baldwin road switchers were sold to other railroads. The SD9s took over yard duties at Conneaut, Albion and Greenville and also commenced working on the branch lines of Kaylo and Hillards.

In 1962, the Bessemer and Lake Erie purchased seven SD18s (Nos. 851 to 857) from Electro Motive Division. The familiar 2000 hp SD38s began invading the property in 1967 with the purchase of three of the six-axle units (Nos. 861 to 863). Like their earlier brothers, these Special Duty diesels share a common heritage as muscle-bound drag engines, capable of standing up to the constant pressures of steep grades and heavy trains running at low-to-moderate speeds. Six SD38ACs were bought in 1971 (Nos. 864 to 869) and twelve SD38-2s were acquired in 1973 (Nos. 870 to 881). Ten more SD38-2s (Nos. 882 to 891) were painted Bessemer orange and black in the late 1970s.

B&LE action really starts at Conneaut, a major port on Lake Erie at the mouth of Conneaut Creek in North-

*A mile long string of empty coal hoppers are shunted around the yard at Conneaut.*

*The B&LE owns seven of these EMD SD18s, used for switching duties around the yards and ore loading facilities.*

*The shops at Greenville can be a good place to photograph B&LE power on a Sunday.*

eastern Ohio, about four miles from the Pennsylvania border.

Two types of operations are carried on here, providing a great deal of traffic for the B&LE. Ore is unloaded from freighters by five giant unloaders and eventually ends up in B&LE hoppers, for delivery to Pittsburgh.

Further east of the ore unloaders, the Pittsburgh and Conneaut Dock Company operates a coal loading machine. Here 130-car strings of loaded coal hoppers go through a device that turns them at a very severe angle, spilling the coal into the hold of ships. With iron ore moving south and coal moving north, the B&LE is able to avoid the pitfalls of one-way traffic patterns that have plagued other railroads in the Great Lakes region.

Motive power on duty at Conneaut is always varied. Orange and black SD9s perform their muscular chores in the classification yard while yellow and black F7As and F7Bs, now used as remote-controlled "drones," work the dock area. The engine terminal is nestled in a comfortable spot close to the harbor and consists of a sanding tower, fueling racks, and a two-story office and crew building.

B&LE trains arriving from the main engine terminal at Albion (16 miles southeast) are usually pulled by SD18s, SD38s, SR38ACs or SD38-2s. On rare occasions, a Duluth, Missabe & Iron Range diesel may be slipped into the power pool. It is possible to achieve a panoramic look at the main classification yard and its saturation of brown ore hoppers by standing on the huge fill that carries the double-track Conrail main line (ex-NYC). The Norfolk & Western (ex-NKP) main line between Chicago and Buffalo crosses the B&LE on a rambling steel trestle that also spans Conneaut Creek. The Bessemer enters this area by following the winding course of Conneaut Creek into the main yard. An ideal location for photographing the B&LE ore drags snaking through this somewhat wild terrain is the U.S. 20 highway bridge stretching over Conneaut Creek. This is a sturdy concrete structure with nice wide sidewalks on both sides.

It would be a good idea to arrive at Conneaut, Ohio, with an 80-200mm zoom lens attached to your camera body. The whole harbor area is fenced and guarded. Everything is strictly off-limtis to railfan-photographers. However, if you park your automobile in the large parking lot of the Pittsburgh and Conneaut Dock Company's main harbor building, you can whip out your zoom lens and pick and choose your targets at will by shooting through the wire fence. It is really a minor inconvenience that you soon learn to adapt to quite comfortably.

The sixteen miles of track extending between Conneaut and Albion are the most tortuous rails on the whole 140-mile route. After the main line leaves the yard, it gently twists and turns along the shores of Conneaut Creek before finally climbing the steep grade at Hog Back Hill. Special duty diesels like the SD9s, SD18s and SD38s really receive a baptism of fire on this rugged altar of nature. There are usually three or four trains running each way on this stretch of track.

Albion is the ideal place to view B&LE diesel locomotives at rest, or shunting hoppers around in the classification yard. There is a large, modern engine house and light repair facility at Albion. It is not uncommon to discover twenty or thirty locomotives (especially on weekends) holding court around the sanding tower and fueling rack. Several styles of B&LE cabooses will also be found parked on sidings at Albion yard.

The old wood-frame depot, painted in a delicious chocolate brown color, stands close to the downtown section of the city and serves as a crew change point and maintenance-of-way storage building. Aside from the double-track main line slicing through the city, there is an important branch line that mean-

ders northeast to Wallace Junction, where B&LE trains can interchange freight cars with Conrail and Norfolk & Western and also run over the N&W to Erie, Pennsylvania (14 miles). In this area of the state, the B&LE picks up most of its general merchandise freight traffic.

The Bessemer & Lake Erie Railroad alternates between single-track and double-track running on the main line between Albion and North Bessemer. Much of the trackage is made up of 152 and 155 pound continuously welded rail (some of it installed as early as 1941) on a CTC-controlled right-of-way. The main line slices through some lush countryside and towns along the line are well-established communities that appear just a bit sleepy to the casual visitor. Shermansville and Osgood provide just the right blend of natural surroundings and modern convenience. They are fine places to achieve blazing action photographs of main line ore drags on the B&LE.

Greenville (39 miles south of Albion) is the kind of city that makes railfans happy. It has literally every ingredient necessary for scenic action photography and bustling shop activity. On the northern fringes of the city, there are tracks and bridges galore. Greenville had the good fortune to be built at the junction of the Shenango River and the Little Shenango River amid some of those rolling hillsides and thick forests previously described.

The city plays host to Conrail, which intersects the town on the old Erie-Lackawanna main line and a couple of ex-Pennsy branch lines, and the Bessemer & Lake Erie Railroad. The B&LE has a most impressive steel trestle crossing the Little Shenango River on the nine-mile long double-track bypass (built in 1917) that allows the ore drags to sneak around Greenville. Plan to spend at least a couple of hours at this spot just photographing B&LE ore trains and Conrail freights trundling across these bridges.

The B&LE "Old Line" is a separate stretch of single-track that branches off the main rails at KO Tower, north of the city. This original main line passes right through downtown Greenville, past the ornate brick B&LE depot/museum and over to the huge locomotive and car repairs shops situated in the thriving heart of the city. Some of the downtown three-story brick buildings are so close to the rails that the engineer of a passing freight could reach out of his cab window and touch them. This single-track line (with passing tracks) is maintained with the same heavy limestone ballast and welded rail as you will find on the newer bypass.

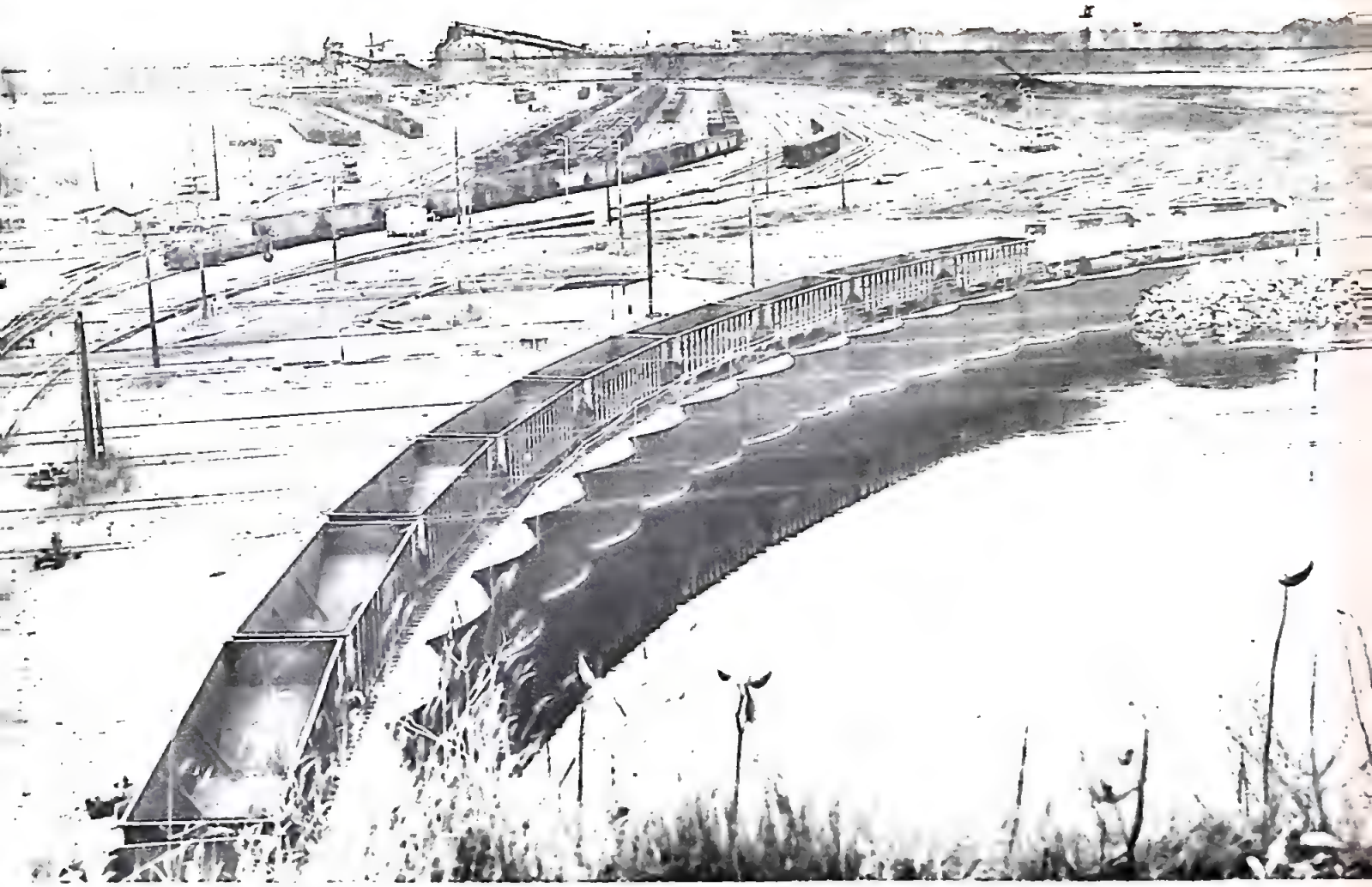
There is a wee sampling of everything to be discovered at the Greenville shops; from bright pink maintenance-of-way coaches to streamlined army-green U.S. Steel Company executive inspection cars to EMD SD7s equipped with steam generators to a trio of B&LE steam locomotives.

Lurking inside the large, glass-walled 17-stall roundhouse can be found locomotive No. 604, an 0-10-2 Baldwin from the class of 1936; locomotive No. 643, a 2-10-4 Texas-type Baldwin from the class of 1943; and locomotive No. 154, a 2-8-0 Baldwin Consolidation from the class of 1909. This trio of locomotives is still looking for a home some twenty-seven years after they were retired from active duty. They have survived the sinister glow of the scrappers torch only to languish in dusty obscurity these many years.

No museum has yet come forth to offer them a permanent residence, although certain organizations have looked them over for possible use in excursion service. However, these groups have always been discouraged by the heavy amount of expensive renovation that would be mandatory to restore these locomotives to operating condition. It is rumored that the B&LE management would like to have them off the property . . . one way or the other.

A guided tour of the Greenville facility reveals the true backbone of the Bessemer & Lake Erie Railroad. There is a vast locomotive repair shop with

*This SD7 is made to look like a toy alongside the giant freighter, J. W. McGriffin.*



*Long strings of coal hoppers are the order of the day, any day, on the Bessemer, as two strings are seen being shunted here.*

a brawny overhead crane where diesels can be stripped down to the bare essentials and any kind of conceivable work performed on them. The day I was there a pair of SD9s were standing naked in their repair bays. You will also be able to admire the big car repair shop where the various B&LE hoppers and cabooses receive major restoration and repainting. There is even a husky engine transfer table to help bind the whole complex together.

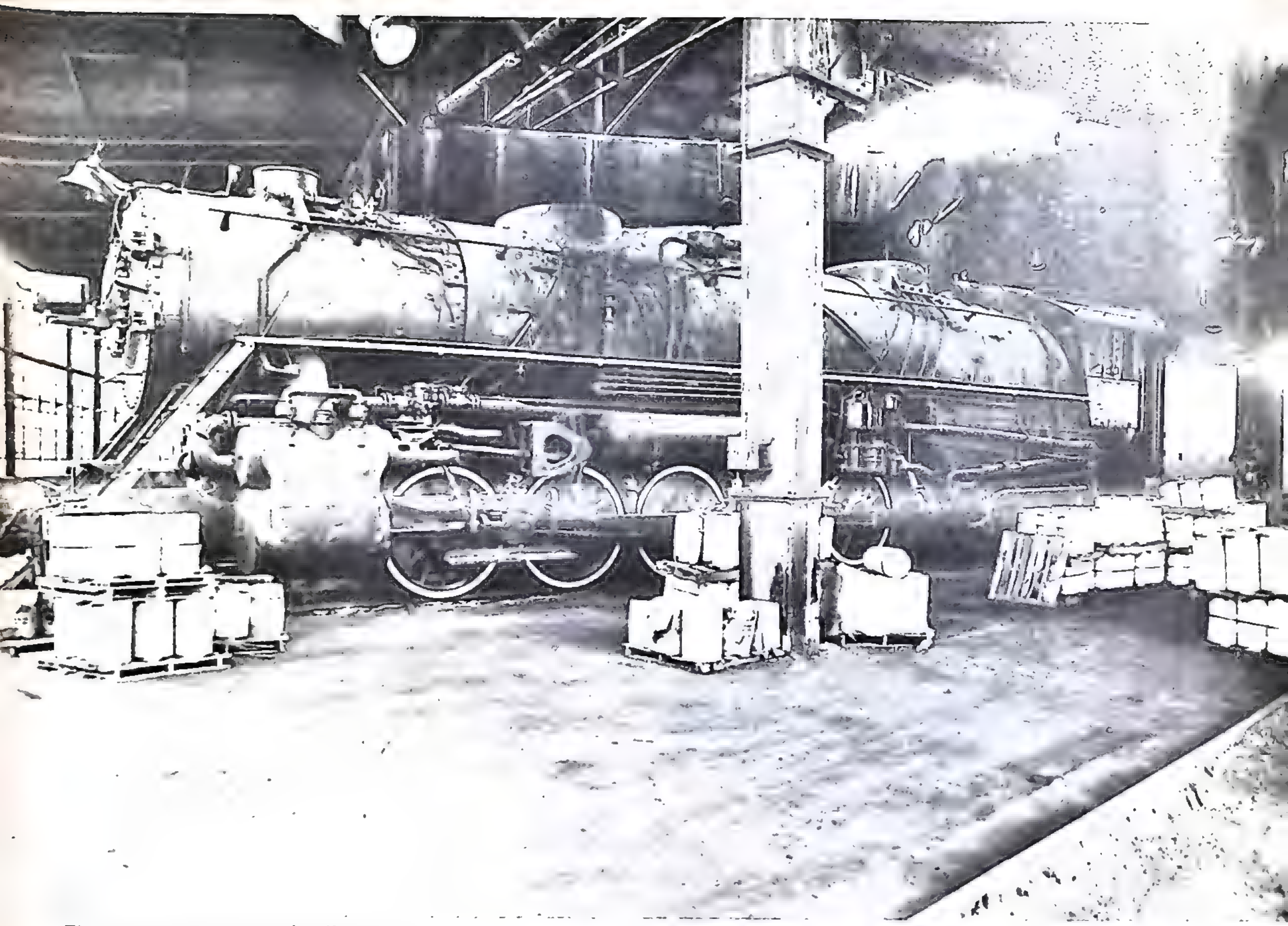
Most of the active diesel power will be found out on the main line or idling at the Albion engine terminal. Do not expect to find more than six to ten units congregating near the Greenville roundhouse. Be sure and stop at the main office building on weekdays or at the diesel-shop foreman's office (located in the diesel repair building) on weekends and obtain permission to be on the property.

Do not leave town on a weekday without stopping at the B&LE-sponsored depot/museum at Greenville. You will be treated to a charming array of old photographs, timetables, operating statistics and railroad artifacts from the past. And, finally, the B&LE's Shenango Classification Yard is situated two miles south of Greenville. This is where the Bessemer carries on a brisk interchange of freight cars with Conrail. The "old line" and the "new bypass" rejoin each other at KY Tower to become one main line again.

After exiting Greenville, the B&LE cuts southeast across the undulating countryside of Pennsylvania, passing through Mercer, Grove City and then Branchton, where the ten-mile long branch to Hillards leaves the main line near a new corrugated steel depot. You can usually see an SD9/hack combination resting near the depot on weekends. This is the line that supplies the B&LE with its wealth of crushed limestone that is used as right-of-way ballast.

Eleven miles to the south is Queen Junction, where the 18-mile long branch to Fairmount and Kaylor is located. This is one of the coal mine branch lines that helps to feed the B&LE with a steady flow of northbound freight traffic.

Ten miles further down the main line is Butler, an industrial metropolis that is built on hilly countryside once owned by Robert Morris of Philadelphia, an important financial backer in the cause of the American Revolution. The city is surrounded by a region that is rich in natural gas, coal, limestone, and just a bit of oil, and many factories dotting the landscape. The Bessemer & Lake Erie Railroad does a generous amount of freight car inter-



*Three steamers are stored at the Greenville roundhouse, including 2-10-4 #643, one of 29 once owned by the B&LE.*

change with Chessie System (Baltimore & Ohio) at Butler.

There is extensive soft-coal mining carried on in the areas just south of Butler and the Bessemer has still another classification yard located at Curtisville, where loaded coal hoppers from the mines are placed behind SD38s for the northbound trip to the coal dock at Conneaut, Ohio.

South of Curtisville, the Bessemer & Lake Erie Railroad crosses the curving expanse of the Allegheny River on a gigantic 2,327 foot long steel truss bridge (built in 1918) at River Valley. Good photos are possible here, but you have to work at it since the terrain is rather rugged.

The B&LE has its southern terminus at North Bessemer Yard, a sprawling freight classification center with a capacity for over 4000 cars, imbedded in the coal rich hills northeast of the Pittsburgh area. These tracks are literally a vast sea of brown Bessemer ore hoppers, plus a sprinkling of cars belonging to other railroads that serve Pittsburgh.

Diesel locomotives prowling the yard or idling at North Bessemer engine terminal are those of the B&LE and the Union Railroad. The Union Railroad is a switching road with 38 miles of "main line" trackage in the East Pittsburgh area. Southbound B&LE ore drags trundle slowly into the yard and the diesels are taken off the train and serviced at the fueling racks and sanding tower. Bessemer diesels are sent north again with coal or a mixture of other freight commodities. Union Railroad diesel switch engines couple onto the loaded ore hoppers and take them some eight miles down the line to the steel mills and blast furnaces that have always been the lifeblood of the Pittsburgh area.

If you plan on photographing the Union Railroad's diesel motive power or any areas of North Bessemer Yard, use a telephoto lens and do it from a safe distance. The railroad police at this facility have a reputation for toughness and they will not tolerate any railfans trespassing on this busy property. Official permission to enter this yard is almost impossible to obtain.

As you have witnessed, the Bessemer & Lake Erie Railroad operation is an intense study in transportation versatility and efficiency that sweeps the curious observer from the tangy nautical flavor of Conneaut harbor to the fastidious atmosphere of the diesel repair shops at Greenville to the dream-like serenity of quiet Pennsylvania farmlands and brooding forests to the clanking and booming turmoil of heavy industry and mining that seethes on the smoky outer fringes of sinewy Pittsburgh.

*Rolling past the elderly wooden depot at Albion, an SD38 built by EMD in 1967.*

*The scenery around Conneaut makes for some great train photography, such as a pair of six-motored units pulling a long string of empties along the river's edge.*

CP Rail Dayliners (Budd RDCs) before VIA takeover heads for Buffalo, New York, for Amtrak connections.

VIA Toronto-Sarnia train #81 passes Stratford, Ontario while on detour caused by freight train derailment at Mississauga.

# VIA: Canada's Amtrak

**Seven years after Amtrak was formed, Canada followed the U.S. plan of placing its national rail passenger service under a government-sponsored corporation.** By Ed Stauss

*Photography by Brian C. Nickle unless specified.*

If the Canadians had wanted to copy Amtrak exactly, they would have named their new passenger railroad Cantrak, but fortunately they decided to call it VIA Rail Canada.

There are other differences. The formation of VIA did not cause the greatest ever number of trains discontinued at one time as the formation of Amtrak did in the U.S. In fact, in Canada only a few minor passenger trains were discontinued by VIA.

VIA was incorporated on January 12, 1977, but did not immediately assume control of their nation's passenger trains as did Amtrak. VIA took control gradually, acting first as just a marketing organization. Over a year after formation, on March 31, 1978, VIA acquired all Canadian National passenger equipment and became responsible for management of CN rail passenger services.

In several other steps, CN employees transferred to VIA, the unions were recognized by VIA, and various operating agreements were arranged. In September, 1978, VIA acquired CP Rail's passenger equipment and took over management of CP Rail's passenger services. The transfer process continued through 1979 and now VIA is essentially the Canadian equivalent of Amtrak.

The VIA plan has worked well with Canadians riding the rails in increasing numbers. More than one and a half million more people are now taking Canadian trains each year than they did in 1976, the last year before VIA. Since VIA was formed, passenger boardings have jumped 34 percent and

*Still in CN colors, an RS-18 with five lightweight Tempo coaches runs to Windsor, Ontario.*

*VIA train #3, The Super Continental, departs Toronto for 2776-mile run to Vancouver.*

*VIA train heads for trainshed at Toronto while passing GO commuter cars.*

in 1979, VIA carried nearly six million passengers. Sales of packaged tours have outpaced regular ticket sales. In 1979, tour sales doubled over 1978.

Much of this increase is due to the same reasons which have augmented rail travel in the U.S. An economic push has come from the oil crunch and an emotional push came from the aura of improvement created by the new marketing by VIA.

Some of the finest rail tours in North America are through the Canadian Rockies on routes through both Banff and Jasper National Parks. There are several tours available through this mountain scenery, originating either in Vancouver or eastern Canada. Of course the experienced do-it-yourself traveler can also buy basic rail tickets and plan his own itinerary.

The CANRAILPASS can be purchased for unlimited riding within a designated section of the VIA network for from eight to 30 days. Winnipeg seems to be the exact east-west center of VIA because the pass for Winnipeg and east is exactly the same price as for Winnipeg and west. In addition to these two half-system passes, there are two smaller regional passes and an entire system pass which currently runs $300 for 22 days in the on-season.

VIA's equipment came from both CN and CP Rail, more than half of

*A matching set of blue and yellow VIA equipment is just two minutes out of London, Ontario.*

*Three Budd RDCs from VIA Rail train #664 arriving at Toronto.*

*Still in CN livery, but not for long is VIA train #663 slowing for a station stop at St. Mary's, Ontario.*

which is now painted in the VIA gold and blue livery. Nearly half of VIA's 941 passenger cars have undergone major upgrading and repair. Some sleeping cars are being converted to the "Daynighter" configuration which is gaining some popularity as a deluxe coach-type car with reclining seats and full leg rest.

The trains using conventional passenger equipment are hauled by a fleet of 146 locomotives of various types which were inherited from CN and CP.

Many of the smaller trains are operated with some of the 82 rail diesel cars which can be found in many parts of the system. The RDCs, which are included in the equipment upgrade program, are often run in multiple units.

The first new equipment to be ordered by VIA are the LRC trains (Light, Rapid, Comfortable) which are expected to enter service in 1981. VIA

*Canadian National observation car on the rear of VIA Rail RDC train passes another RDC train in Ontario.*

*Train #664 at London Junction, Ontario is made up with three Railliners.*

ordered 50 LRC coaches and 22 locomotives from the Canadian MLW plant. These new LRC trains will be modern and comfortable with interiors that are flexible to changing passenger needs. There will be special facilities for handicapped travelers and at-seat meal services.

Before VIA was formed, the Canadian government had been subsidizing up to 80 percent of the losses experienced by the CN and CP Rail passenger operations, yet the government had no control over the management of these services. VIA has a mandate from the government to revitalize rail passenger service in Canada and to market and manage it on an efficient commercial basis, reducing the financial burden on the government.

VIA operates under contract with the government to provide designated services and, in turn, enters into contracts with the railways for the operation of the trains. Apart from operating and overhead costs, most of VIA's disbursements are made to the railways for operation of the trains and equipment maintenance.

Just as Amtrak is doing in the U.S., VIA is promoting an intermodal concept in which they hope to coordinate all public transprtation services—train, bus, ferry, and plane. The national objective is to provide good, reliable public transportation at reasonable cost.

One of the first intermodal stations to be placed in operation by VIA is at Kapuskasing, Ontario, where train passengers can transfer to a bus to continue their trip with only a five-minute layover.

Although Amtrak is gradually changing its policy to include commuter service, VIA still considers itself to be exclusively an intercity railway and leaves the commuter services to other railroads.

For the long distance traveler, VIA offers an attractive way to go with new or upgraded equipment, coordinated schedules, and a fresh, new outlook. Says VIA Rail Chairman and President Frank Roberts, "I see an extremely bright future for passenger trains in Canada. We shall simply no longer be able to ignore the fact that trains are the most energy-efficient means of public transportation available to us."

*Toronto-Montreal RAPIDO stops at former CN station in Kingston, Ontario at sunset.* H. W. Bonin

A Welshpool & Llanfair train crosses the newly repaired Banwy River bridge.

The new end of track on the Talyllyn is Nant Gwernol, where the locos run around their trains.

A sweeping curve leads into Devil's Bridge on the Vale of Rheidol Railway. *Photos by the authors*

# HEART OF THE NARROW GAUGE

**A trip to Wales provides a look at how this whole phenomenon started . . . and continues**

By Claude and Margaret Wiatrowski

Imagine a mountainous region bordering the sea where eight narrow gauge railways still operate in steam. No farther than 50 miles from each other, with gauges from 1′ 3″ to 2′ 7½″, articulateds climb from wharf to mine and cog engines blast up to the highest peak. Railroads operating since 1836 mix with numerous abandoned grades of less fortunate brethren. Yet it seems a railfan group exists to restore nearly every weed-grown grade, with track already being laid on some. In fact, many of these railways owe their existence to railfans. Fans help maintain and run many of them.

This steam-powered Valhalla is no hallucination but a region of Wales in which circumstance and hard work combined to save the prototype narrow gauge railways. Here the first experiments with narrow gauge steam power

*Festiniog train crosses a seawall called "The Cob," after leaving the five-track yard at Porthmadog.*

were performed, that dismayed critics and set the stage for the narrow gauge revolution of the last part of the 19th century.

An American railfan would probably be most interested in the Festiniog, Talyllyn, Vale of Rheidol and Welshpool and Llanfair railways. The Festiniog and Talyllyn are the Welsh equivalent of Chama, New Mexico and Orbisonia, Pennsylvania, having complete historic physical plants and large indigenous collections of rolling stock. Although carrying some freight, the Snowdon Mountain and Fairbourne railways were and are primarily passenger carriers.

Narrow gauge mania has re-rooted itself in Wales to the point of having two narrow gauge railways, the Llanberis Lake and Bala Lake, which are newly constructed on abandoned wider gauge grades. Rail museums and exhibits abound, with particularly interesting displays at Penrhyn Castle, Tywyn, Corris, Blaenau Festiniog and Betws-y-coed. Let's start our meanderings through northern Wales with the oldest of them, the Festiniog Railway.

The Festiniog opened in April of 1836 to transport slate from the quarries at Blaenau Festiniog to the quays at Porthmadog, 13 miles distant. Originally, loaded cars descended the grade by gravity. A water powered incline lifted them over the sizeable ridge a few miles west of Blaenau. Later, the Moelwyn tunnel was bored through the ridge. Horses, carried down on the train, hauled the empties up to the mines. Blaenau was eventually to boast of fifteen quarries and three railroads. In 1863 the first steam engines were delivered to the railway, the Prince and Princess. The Prince is still in service, possibly the oldest locomotive in service, while the Princess is on display in Blaenau.

In 1863 the battle of the gauges was between 4′ 8½″ and Brunel's 7′ 0¼″. Many suggested that steam locomotives were impossible on the Festiniog's 1′ 11½″ gauge. No one suspected the world-wide revolution the Festiniog was to presage. Even in early years the line tried to encourage tourist business, carrying 55,500 passengers in 1934, but the end caught up with the centenarian in 1946. Several attempts were made to save the line and a revenue train ran again in 1955. In 1977 the railroad carried 390,000 passengers! A large stable of locomotives includes three double fairlie articulateds, the newest just constructed at the line's shops.

The Festiniog maintains a year round schedule. Winter service is somewhat irregular but summer service features 14 trains daily with 22 on weekends! The railroad is signaled, has welded rail and has food and beverage service . . . all on a two-foot-gauge railway. The train leaves Harbour Station in Porthmadog. Porthmadog is still served by British Rail and is soon to be served again by the in-restoration Welsh Highland Railway. The Festiniog crosses a great seawall called the Cob where good

*A Festiniog passenger train steams by a work train just prior to entering the new Moelwyn tunnel.*

pictures of inbound and outbound trains are possible. At the opposite end are the road's shops at Boston Lodge.

Crossing under the highway, the train pulls into Minnffordd station, with its photogenic buildings and platform. Here British Rail dives under the narrow gauge. The remains of extensive slate interchange sidings are visible northeast of the station. A network of residential roads offers several opportunities for photographs of trains on a long stone embankment before reaching Penrhyn Station. From here photo opportunities are limited because of lush vegetation until Tan-y-bwlch Station.

Besides station locations, a clear shot of the line high on a sidehill can be had from the western edge of Llyn Mair (Lake Mair), just below Tan-y-bwlch. Passing through the short Garnedd Tunnel, the train continues to Ddualllt Station where the track leaves the original grade to Blaenau. The original Moelwyn Tunnel and the track beyond are flooded by a hydro-electric project. After a protracted court battle, the railroad won limited compensation and has almost completed a new line into Blaenau Festiniog.

An enormous engineering work, the railway loops over itself at Ddualllt, gaining altitude to burrow through the same ridge with a new Moelwyn Tunnel to emerge on the shore of the new lake. In 1979 trains ran as far as Tanygrisiau where the new and old grades converge. Perspiring track crews could be seen completing the last mile or so into Blaenau.

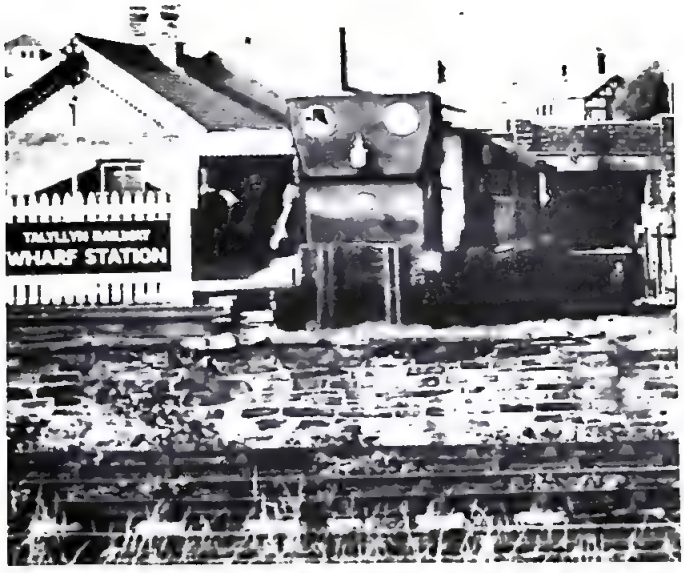
Some of the best photographic opportunities are offered by this upper end of the line. The rails cross a waterfall near Tanygrisiau on a small bridge. A trail (public footpath) leads from a parking lot from just west of Tanygrisiau to Ddualllt. Ddualllt has no road access. The trail parallels the railroad and uses the old right of way of the water powered incline over the Moelwyn Tunnel. Several good photos are possible from near the top of the ridge. The trail descends to join the abandoned grade to the old Moelwyn Tunnel, track still in place. Arriving at Ddualllt for photos of trains on the loop and meets at the station, you simply catch a train to return to Tanygrisiau.

Blaenau Festiniog has two interesting museums in slate quarries, Llechwedd and Glodffa Ganol. Llechwedd includes a ride into the quarries on a mine train. The Narrow Gauge Railway Centre at Gloddfa Ganol houses about 50 locomotives with another 50 due to be added to the stable. During the summer, the Talyllyn and Festiniog both run enough trains to make the railway an acceptable (in some ways, preferred to the narrow Welsh roads) means of transport for photography. Short walks from stations down country roads and trails provide an impressive array of photographic opportunities without resorting to an automobile.

The Talyllyn Railway entered the 1950s as a 2′ 3″ gauge anachronistic streak of rust. Built in 1866, a few years after the Festiniog converted to steam power, two steam locomotives provided power to haul slate from the quarries near Abergynolwyn to a standard gauge connection at Tywyn almost seven miles distant. After the quarry closed in 1946, traffic declined considerably to a small amount of summer tourism. After the death of the railway's owner, Sir Henry Haydn Jones, a preservation society took over the line, providing uninterrupted service from 1866!

The society found the railroad with the two original locomotives, the original passenger coaches and the original 1866 iron rail still carrying the diminutive trains. Under the society's direction, the railway has come a long way, handling large volumes of traffic during the summer on 11 trains (17 on weekends). The road is closed from November until March.

The railway begins at Wharf Station in Tywyn where the remains of the slate exchange sidings can be seen next to British Rail's line. The narrow gauge museum located at Wharf Station has




*With British Rail tracks in the foreground, a Talyllyn train sits in Wharf station, where slate was once transferred from the narrow gauge.*

*Talyllyn No. 3 takes on fuel and water at the Wharf terminal prior to another passenger run.*

an impressive array of locomotives and rolling stock belied by its small size (these trains are tiny!). The train leaves Wharf Station under the main highway and rolls through a cut to Pendre Station, also in Tywyn, where the railway's shops are located. Antiquarian buildings and a photogenic platform make for good pictures.

A primary and then a secondary road parallel the railway up the valley. Again, vegetation limits photographic opportunities from the road and long lenses are in order. The rails cross a spectacular masonry viaduct just before reading Dolgoch Station. A short walk over the hill to the west of the station will provide pictures of this massive bridge. The railway originally terminated at Abergnolwyn station with an incline serving the town below in the valley and an industrial railway carrying the slate from Nant Gwernol, one half mile further east from Abergnolwyn.

The railway has recently widened and restored the rail line to Nant Gwernol and passenger trains now run to Nant Gwernol for the first time since 1866. Nant Gwernol has no road access but is the starting point for a hike up the abandoned incline railways to the ruins of the slate quarries. While locomotives 1 and 2 are the original Talyllyn stock, Corris locos 3 and 4 are the workhorses of the line. A small museum at Corris preserves the history of the 2′ 3″ gauge Corris Railway, abandoned in 1948.

Opened in 1902, the Vale of Rheidol Railway transported lead from near its terminus at Devil's Bridge to Aberystwyth's rail and water connections. Freight traffic ceased and the harbor branch was removed in 1924. Winter passenger trains ended in 1931 making the road a summer tourist line. Nationalized in 1948, it is the last remaining steam operation of British Rail.

The Vale of Rheidol shares the Aberystwyth station with its wider gauge brethren. Since 1968 narrow gauge servicing has been accomplished in an old standard gauge shed. Three 2-6-2-Ts are among the heaviest locos you'll find in Wales, weighing 24 tons. These eight foot wide behemoths run of 1′ 11½″ gauge track. Open from April to October, trains are never numerous, rising to five a day. The road south from Capel Bangor intersects the railway and another road parallels the line as far as a power station up the valley. Photos are limited due to vegetation. Stations at Nantyronen and

*Putting on quite a show, one of the Vale of Rheidol trains steams across the countryside.*

*Almost lost in the lush countryside, a Welshpool and Llanfair train passes through Coppice Lane.*

## WALES TOURIST INFORMATION

**Narrow gauge timetable and joint tickets**
Narow Gauge Railways of Wales/Joint Marketing Panel
Wharf Station
Tywyn,
Gwynedd. LL36 9EY
WALES

**Publications, maps and general information**
Wales Tourist Board
Brunel House
2 Fitzalan Road
Cardiff,
South Glamorgan.
WALES

**Standard gauge schedules**
British Railways
Divisional Manager
Station Road
Stoke-on-Trent,
Staffordshire.
ENGLAND

**Bus schedules**
Crosville Motor Services Ltd.
Crane Wharf,
Chester,
Cheshire.
ENGLAND

Aberffrwd are accessible by car. The up trains stop for water at Aberffrwd. The minor access road to Aberffrwd can be followed out of the valley and intersects the main road to the line's terminus at Devil's Bridge where there are several photographic opportunities.

If you return from Aberffrwd to the road up the valley, you can get some pictures from the power plant parking area. A very narrow road leads east from the power plant and provides a chance to photograph the train crossing the mine tailings. Again, long lenses are imperative.

The Welshpool & Llanfair Light Railway was opened in 1903. Its 2′ 6″ gauge rails serve the agricultural area between Welshpool and Llanfair Caereinion, nine miles in length. The Welshpool was the first railway built under the Light Railways Act of 1896. This act allowed railway construction of less than the monumental quality previously required. For example, level un-gated road crossings were allowed and signaling was not required! Speeds were limited to 20 mph. The act also provided for government funds to promote the construction of Light railways to serve the rural populace.

The Welshpool, carrying mostly agricultural products, livestock and coal, was never phenomenally successful. Nationalized, it was closed by British Rail in 1956. Reopened in 1963, today's railway is a tribute to the hard work of a preservation society.

*The engine terminal of the Vale of Rheidol Rwy at Aberystwyth is loaded with intriguing cars and locos.*

The railway's shops are at Llanfair and many locomotives are stored here, including the two original iron horses of 1903, the Earl and Countess. The line is open from April to October. Still growing, only three trains run daily during the height of the season. The road to Welshpool parallels the rail line and several locations for long lens photos are available. Country lanes leading south from the main highway intersect the railway at several points.

Leaving Llanfair, the train crosses the Banwy River Bridge some distance east of town. A picture at the bridge can be had from the highway. Just before reaching the little yard at Cyfronydd, the train crosses the impressive Brynelin Viaduct. Due to heavy vegetation, a photo coming through the Cyfronydd yard might be more rewarding than the viaduct.

The road to Castle Caereinion also crosses the rails but continue on to the next road as the train works steam both ways up the steep grade to the crossing at Coppice Lane. The run currently terminates at Sylfaen right on the main highway. A common pastime of Welsh narrow gauge railways seems to be extending their trackage and the Welshpool is no exception. Work has begun on extending the line to Raven Square station on the outskirts of Welshpool. The original align-

*On the Snowdon Mountain, the line crosses an impressive stone viaduct shortly after leaving Llanberis.*

*The Fairbourne Railway is a tiny 15" gauge line with about two miles of track, and a number of steam locos.*

ment through town to the British Rail connection has been usurped by the city of Welshpool.

Ascending to the top of Mt. Snowdon, the Snowdon Mountain Railway has never had a shortage of passengers to ride its 2′ 7½″ rails to the mountain top. The Abt rack of this cog railway extends from Llanberis to the summit of the highest mountain in England and Wales via an almost five-mile route with grades over 18 percent. Seven steamers carry close to 200,000 passengers to the heights from April to October. Up to forty revenue trains daily polish the rails. A workmen's train ascends each morning to drop switchmen at the meeting points and carry supplies to the summit's restaurant.

Completed in 1896, the line has an interesting history including military use during the Second World War. A road southeast of the Llanberis terminal leads up the line for a couple miles. Just outside Llanberis is an impressive masonry viaduct. You can drive to photograph the trains past Hebron station. The upper portion of the line is easily photographed by riding to the summit and walking down the trail that follows the rains (The Llanberis Path). Stations at Clogwyn and Halfway have passing tracks and water supplies as does Hebron. Meets of up to four trains at a station occur in heaviest traffic.

The Fairbourne Railway is one of several 15″ gauge railways in Britain. Originally built as a 2′ gauge horse drawn tramway, it was converted to steam and narrowed in 1916. Carrying passengers the two miles from the resort of Fairbourne to the ferry terminus at Penrhyn Point, the little steamers stop at intermediate stations along the beach. The line parallels a road most of its length and photos are easily obtained.

The station of the Llanberis Lake Railway is across the road from the Snowdon Mountain station. Built on the abandoned grade of the 4′ gauge Padarn Railway, this railway uses the rail and locomotives from the Dinorwic quarry with an original gauge of 1′ 10¾″ changed to 1′ 11½″. By the way, the Padarn had 4′ gauge cars upon which the 1′ 10¾″ rolling stock could be transported. One such "host wagon" is at Tywyn. The Padarn closed in 1961 and the Llanberis Lake started building in 1970. From April to September, up to 14 trains daily snake along a few miles of the shore of Llanberis Lake. The highway is across the lake and telephoto shots are possible.

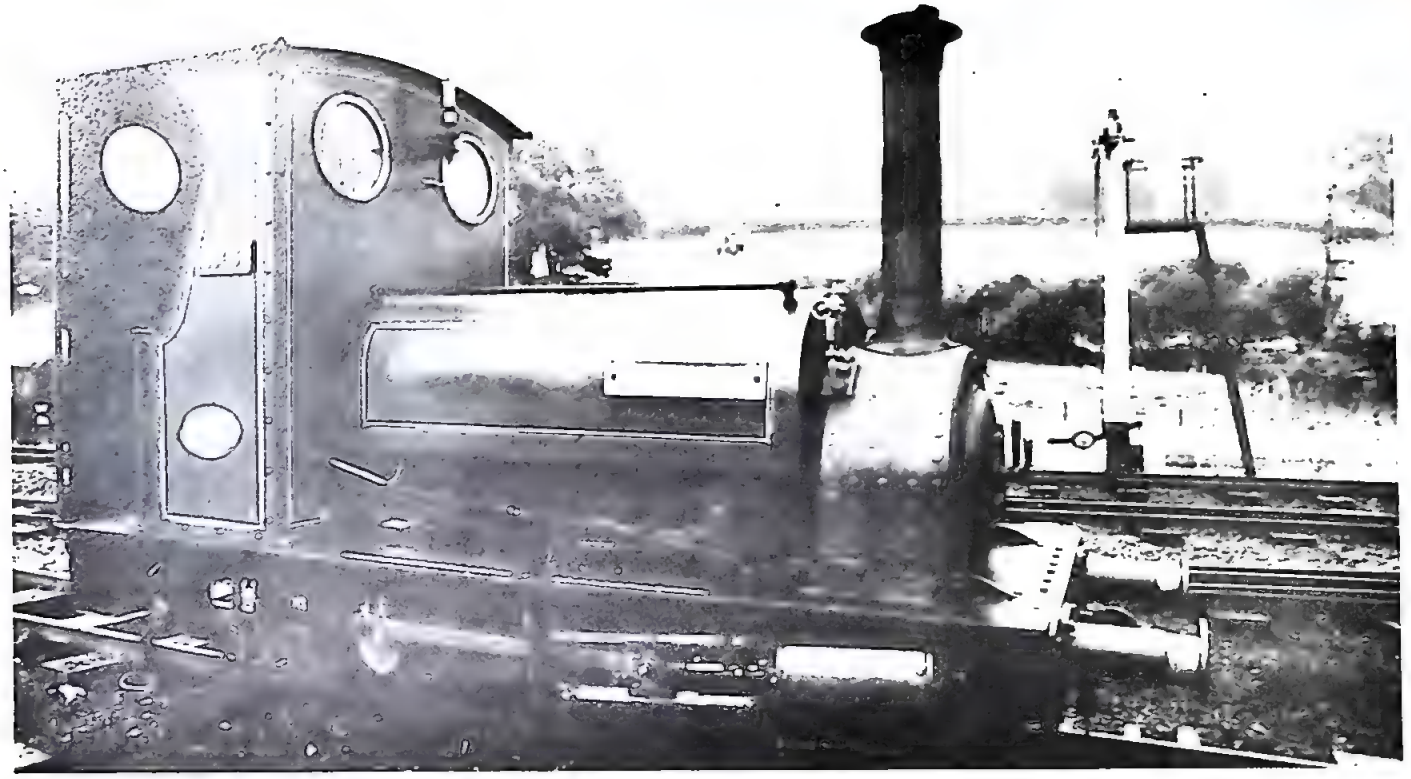
Besides Gilfach Ddu station at Llanberis, you can stop at Cei Llydan for photos of following trains. You can not join or leave the train at Penllyn, the line's terminus, but a road leads here for pictures if desired. The Dinorwic quarry was the world's largest. The shops next to the Gilfach Ddu terminus were converted into an industrial museum when the quarry closed in 1969.

Work started on the Bala Lake Railway in 1971. Built on 4½ miles of a standard gauge grade abandoned in 1965, the Bala Lake provides a pleasant trip through the Welsh countryside on 1′ 11½″ gauge track. Open April to October, up to eight trains carry passengers from Llanuwchllyn and the road's shops to the opposite terminus at Bala. The main highway is across the lake from the rails. A secondary road offers limited access to the rail line.

At least two other museums are imperatives. The industrial railway museum at Penrhyn Castle near Bangor contains an outstanding collection of rare locomotives. The castle itself was built by the Pennant family, owners of the slate quarry at Bethesda and the 1′ 10¾″ gauge railway that connected the quarry with Port Penrhyn. Although these rails have been gone since 1960, the display at the castle has one Penrhyn steamer. Two others operate on the Festiniog. Amng other rare locomotives at Penrhyn Castle is the Fire Queen, built in 1848 for the 4′ gauge Padarn.

The Conwy Valley Railway Museum at Betws-y-coed has a sampling of interesting standard and narrow gauge rolling stock. A 7½″ gauge live steamer (2′ gauge prototype, of course) provides transportation.

The 3′ 6″ Great Orme cable railway runs from Llandudno. The Aberystyth Cliff Railway hauls passengers 400 vertical feet in Aberystwyth. The Gwili



*The Bala Lake Railway at Llanuwchllyn uses both steam and diesel locomotives to pull their trains.*

Valley Railway runs a standard gauge steam road near Carmarthen. Other railroads and museums are building at Pencader, Pontsarn, Llangollen, Swansea, Nantle and who knows where else. I'm sure some of these last named projects are just gleams in a promoter's eye while others are well established preservation societies steadily working toward their goal. Of course, British Rail standard gauge lines run through Wales and some have passenger service.

Wales is a relatively easy international trip to an English speaking country. The worst hardships you will suffer will be driving on the wrong side of the road and drinking warm beer. For photography, a UV filter might be advisable for cutting through the humid air. A 40-100 zoom lens would take care of most photos except a few very long shots available from nearby highways. Even though a car would speed travel among the various railroads, respectable photo coverage can be obtained without one. On many of the lines, you could take the first train out and spend the day riding and walking to photo locations.

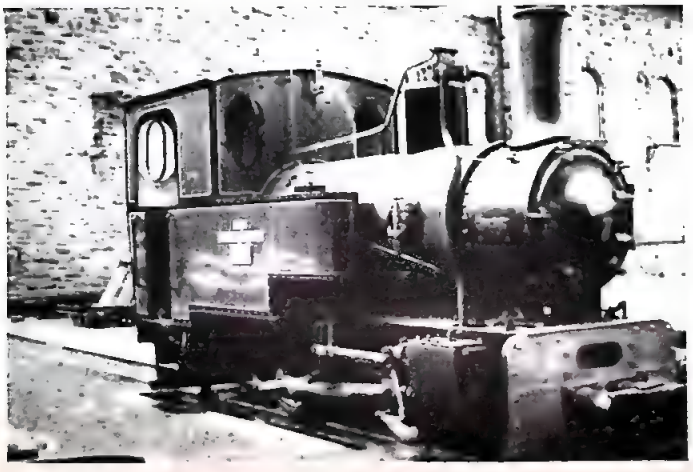
British Rail passenger trains serve the Vale of Rheidol, Talyllyn, Fairbourne and Festiniog. The other lines can be reached by bus. Railroad personnel are generally hospitable and we received a few escort tours. Even though many are railfan run, they maintain normal security and do not appreciate trespassers.

Welsh weather is best in May and June with the fall a close runner-up. Main tourist periods are Spring Bank Holiday (May 25-31 in 1980) and the third week in July until the end of August. A Joint Tourist Ticket is good for unlimited travel for seven consecutive days on all of the narrow gauge lines except the Snowdon Mountain.

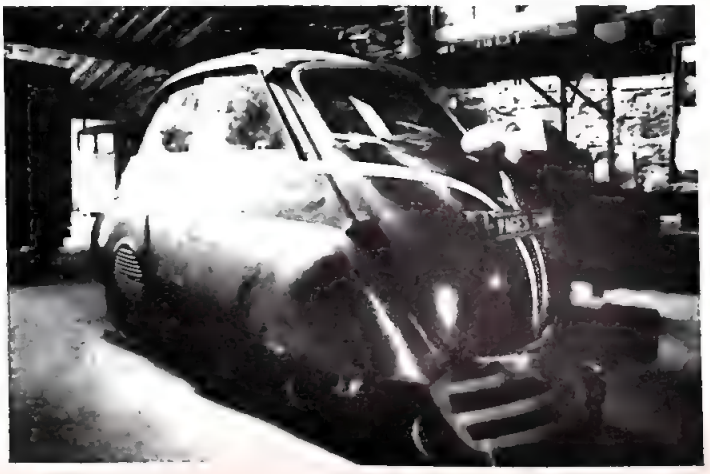
Not only is Wales an easy international trip, but its railways are interesting, varied and historically significant for their role in founding the narrow gauge revolution.

We owe special thanks to Mr. D. Woodhouse of the Narrow Gauge Railways of Wales/Joint Marketing Panel for his aid in supplying information.

*A number of quaint, tank steamers are serviced in an old quarry shop on the Llanberis Lake railway.*



*The Narrow Gauge Railway Center at Glodffa Gonol has more than 50 interesting rail exhibits, with many more expected soon.*



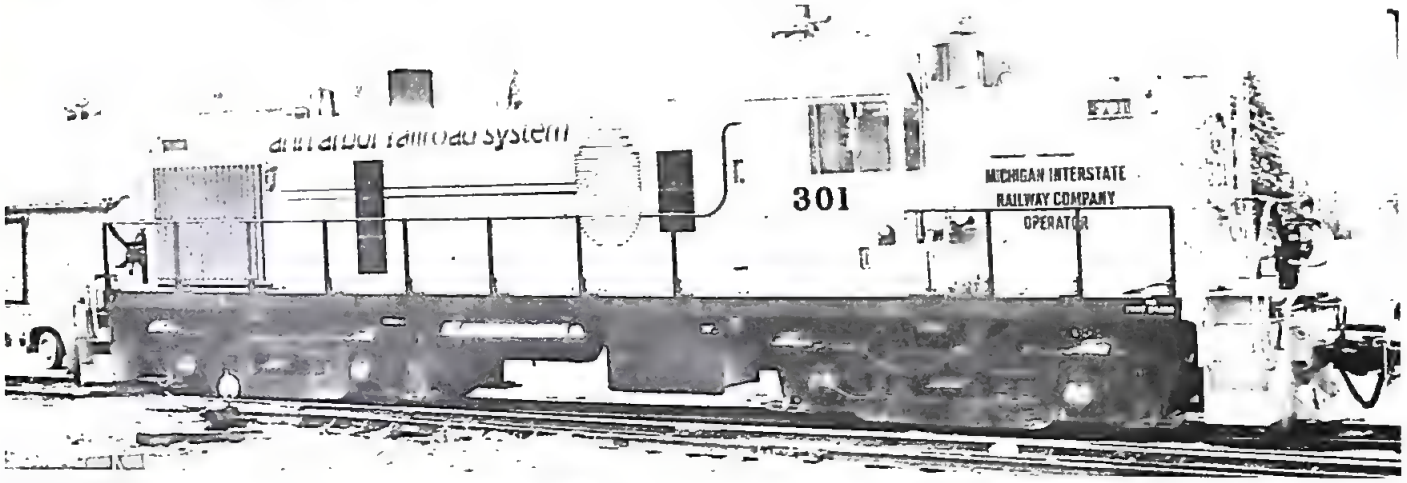
**The LEV 1 (Light Experimental Vehicle) is a new railcar built by British Leyland for low density passenger runs. It is being tested by Amtrak and Massachusetts Bay Transportation Authority. (MBTA), and was photographed at Mansfield, Massachusetts. The car was also tested on a route to Concord, New Hampshire, on a recently inaugurated service.** Michael J. O'Connor

*Conrail #1980 has a new slogan for the beginning of the decade. The GE B23-7 was seen at Columbus, Ohio, and whether CR locos will receive the marking is unknown.* Roger E. Beighley

**Amtrak's new LRC trains built by Bombardier Ltd. of Canada are seen in February of 1980 undergoing tests in St. Lambert, Canada, on the Canadian National. First completed was power car #38 and five cars (41-46). By spring the trains should be delivered and placed in service on corridor service in the east.** Guy Chartrand

# What's Happening

**Rail Classics** will pay $5.00 for each photo used in WHAT'S HAPPENING. News photos of all types are welcome, both black & white prints and color transparencies. A self-addressed, stamped envelope is required for return of unused material. Send to WHAT'S HAPPENING, Rail Classics, 7950 Deering Ave., Canoga Park, CA 91304.



John Uckley

*A new image for the Ann Arbor emerged recently on two Alco RS2s (301 and 303), purchased from Green Bay & Western. Caboose 2931, along with three of its sisters, received the same red livery with the modern logo and black lettering. The logo background is an abstract ferry boat design.* Dan Gibbs

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*The Providence & Worcester has returned to an American builder after earlier ordering Canadian-built diesels. The Massachusetts-based railroad purchased a GP38-2 which is shown here a week after delivery (3-2-80) at Worcester, Massachusetts. The locomotive is bright red with a white center panel and yellow stripe along the frame.* Michael J. O'Connor

*Rock Island #3000 is a GP-35 rebuilt in the company shops. It was seen on January 8th westbound through Lincoln, Nebraska, and would not be all that newsworthy, except that it may be the only rebuild as the Rock falls deeper and deeper into trouble and may no longer exist by the time you read this.* R. L. Schmeling

*A less than friendly operation on the Burlington Northern, as one unit coal train rear ended another. It would be bad enough under normal conditions but consider: (1) the locomotive was a Santa Fe C30-7 on run-through service, (2) the caboose was only a week old, and (3) it was Christmas Day! Accident happened southeast of Firth, Nebraska.* Mark W. Heinz

*The first passenger train to Columbus, Mississippi (from Birmingham, Alabama), was an inspection trip by Southern Railway officials to check the line for cwr upgrading. The Weyerhaeuser Company is building the nation's largest cardboard container plant in the area which should make this a most profitable line. Train consisted of two FP7s, Pullman sleeper, Research car R-1 and four office cars including observation "Buena Vista."* David Hurt

*Passenger service has returned to the state capital of Concord, New Hampshire. A B&M GP7 and RDCs (converted to coaches), required for weekday service, lay over in the yard at Concord, while F40PH #1005, with five Pullman Standard coaches, prepares for the 9:35 a.m. departure for Boston. Service began on January 28, 1980.* Ronald N. Johnson

*Conrail's Elizabethport (New Jersey) Diesel Shop turned out their first E-8 rebuild on October 25, 1979. #4248 is the first attempt to produce a reliable locomotive for passenger service on the North Jersey Coast Line. The photo was taken by Walt Grosselfinger, who also was the guiding force for the "V" stripe design on the locomotives.*

*It's no match for the brute look, but Amtrak's new EMD-built AEM7 is the replacement for the GG-1. No. 900 is now undergoing testing in the east and will soon be joined by 45 more of the electrics, built following a Swedish design, riding in a carbody built by Budd. Looks like the perfect way to utilize European technology, yet keep most of the money and the jobs in the U.S.* EMD photo.

# HOME-BUILT TROLLEYS

## But often they were turned out in large batches and sold to other operators

By Van Wilkins

*Photos from Stephen D. Maguire except as noted*

Most of the streetcars and interurbans which ran in the United States were the products of a handful of carbuilders. Largest by far was the J. G. Brill Company of Philadelphia, with subsidiaries in such diverse places as Cleveland, St. Louis, Danville, Illinois; Elizabeth, New Jersey; Springfield, Masachusetts; and Preston, Ontario. The St. Louis Car Company and Pullman-Standard and its predecessors accounted for most of the rest.

There was a tradition in the street railway business that cars had to be tailored to meet special conditions in each city. For years Brill published a magazine which described in detail how problems unique to one locale or another were met.

And Brill and the others did turn out products custom-designed to the needs of the larger companies. So strong was the every-city-is-different tradition that at one point development of the modern PCC car may have been jeopardized by statements that a "standard" streetcar suitable for use on any property was being designed.

But careful examination of trade publications shows that more or less standard designs were available. Smaller companies bought these off-the-shelf models, with only minor variations to meet local conditions.

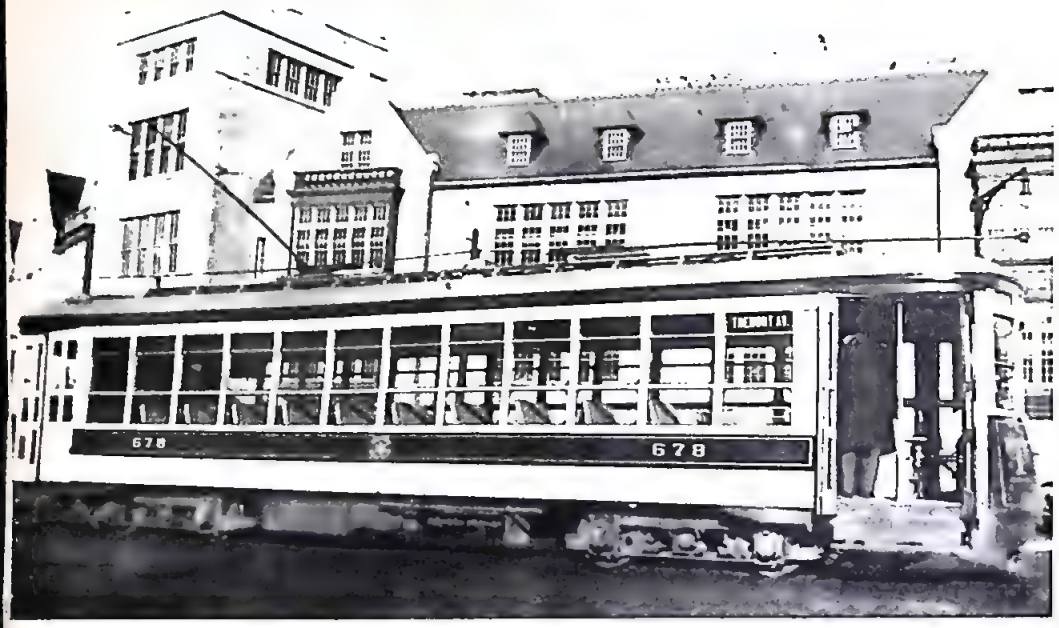
Companies in the larger cities, however, did believe it necessary to have designs that were especially built for their own operations. Most relied on the major builders, but some struck out on their own. They designed and built in their own shops large numbers of cars with distinctive characteristics.

In some cases this led to the establishment of a separate car building company. Perhaps the best example was the Cincinnati Car Company, which had its start in the shops of the local street railway. The products were so well thought of that in 1902 the separate company was formed and sales made to other operators. The effort culminated in the early 1920's with a design which made use of a reverse curve built into the side panels of the cars, giving added stiffness and thus allowing a significant reduction in weight. Some 400 were built, but after an abortive effort to enter the trolley coach business production ceased in 1931.

Another example which led to formation of a separate company had quite a different history.

Like most other companies, the Twin Cities Rapid Transit Company in Minneapolis and St. Paul initially bought cars from established manufacturers. Not satisfied with some features, the company began to make modifications and then to rebuild equipment to radically different configurations. It finally

*Public Service Railway of New Jersey turned out nearly 250 cars of this general design betwen 1908 and 1923 in their own shops and bought others built to the same specifications from the Cincinnati Car Company.*
R. E. Johnstone from M. E. Borgnis




*PCC cars had been on the streets of American cities for several years when brand-new 678 rolled out of the Third Avenue Railway shops in 1939. Probably the most modern "conventional" cars to be built in the United States, many were sold to Veinna, Austria, after service ended in the Bronx. 678 returned to the U.S. some years later and can be ridden today at the National Capital Trolley Museum outside Washington, D.C.*

*Market Street Railway settled on the "California" design, with a closed center section and an open section at each end, as best for the mild San Francisco climate and built over 250 cars to the pattern. Eventually the ends were closed in, but the wide post between the third and fourth windows at each end mark the ends of the original closed section.*

*After depending for years on the local Woeber Carriage Company for their passenger equipment, in 1922 the Denver Tramways tried their hand at building its own. 848 was part of a batch of 50. All but two ran on track of 42-inch gauge.*

concluded that it was unable to find a builder able to manufacture cars suited to its needs, so in 1898 it established a car-building shop and began production of its own cars—a practice which was to continue until 1928.

TCRT-built cars from the first had a number of distinctive design features, and one doesn't need a photo caption to identify a car as a Minneapolis-St. Paul product. They had a massive appearance and were wider than the usual practice—exceeding nine feet in some cases. Ends were rounded and the front had five windows in place of the usual three. The first cars had an open rear platform, but the five-window design was used here as well when the need to enclose the platform was recognized. Passenger entrances and exits were later extended into the curved portion of the ends, eliminating at least one and sometimes two windows. Many cars had large wire gates in place of folding doors at the rear.

Like most cars of the era, these products were deck roofed. Not so typical were the sides, which were of tongue and groove lumber without the curve common to many contemporary vehicles. Steel plate replaced the wood in later versions. Throughout the entire evolution, the company maintained the distinctive appearance, however.

Later the company experimented with arch roofs and lightweight construction, but the same general lines, though lower to the ground, prevailed. There were new truck designs developed to accomplish this.

For some years the company had built cars for the system in Duluth, which had similar operating problems, and for several local operators, using standard TCRT designs. After the new, lightweight concepts were worked out in the early 1920's, a separate company was formed with an eye to selling these cars elsewhere. The Light Weight Noiseless Electric Street Car Company (ungainly name!) was to market cars built in the Snelling shops to other transit properties, using the TCRT lightweight design.

The first order was of conventional pattern, however. Fifty car bodies were turned out for Chicago to their specifications. Orders for the TCRT design followed, though, and cars were produced for use in Superior, Wisconsin; Nashville and Chattanooga, Tennessee; and Evansville, Indiana. The company also provided a car for the Grand Rapids, Michigan competition, but that order went to St. Louis.

The lightweight design didn't prove satisfactory, and no other orders were obtained. The 93 cars built were not an impressive total.

But the total output of the TCRT—1269 passenger cars (not including the cars built for Lightweight Noiseless) and 69 service cars—was impressive. It was a total unsurpassed by any other street railway company in the United States.

Another example of home-built cars leading to the formation of the company to sell to others had its origin in Watertown, New York. Superintendent Edward A. Barber of the Black River Traction Company, frustrated that cars of conventional design didn't hold up on the company's poor track, designed and built cars of a square, center entrance design for local use. Eleven cars were built between 1905 and 1908 for use in Watertown, and these attracted the attention of another railway operator with a line in Pennsylvania. The Barber Car Company was formed to build cars in the city of York, first supplying the Sunbury & Selinsgrove, and later lines in New Jersey, Texas, Iowa, and Indiana. Some were for electric operation; others carried an electric generator driven by a gasoline engine. All were single truck, except for the final car built in 1915 for the Sunbury line. A total of only 27 cars were built, of which nine were gas-electric. The entire effort could not be considered successful.

In Chicago, the local system didn't build cars for others, but turned out cars in enormous quantities for its own use. Between 1899 and 1929 a total of over 700 powered cars and 58 trailers were built.

Most of the Chicago products were of a more conventional appearance than those of Minneapolis. In some cases car orders were split between several builders and the Chicago Surface Lines facilities, with the same specifications assuring a virtually identical product from each source.

After 1917, CSL was the operator of all surface lines in Chicago, but the cars, track and facilities were owned by "underlying" companies. One of these turned out the first home-builts. In 1899-1900 Chicago Union Traction built 77 deck roof cars, some of which lasted as service equipment until 1958. Others were earlier sold to lines in Indiana and Iowa.

Another underlying company, Chicago Railways, between 1911 and 1914 built a total of 315 arch roof cars which in general appearance were typical of Chicago cars for years to come. Another 100 nearly identical cars were assembled in Chicago from bodies, trucks and equipment provided by various builders.

1921 saw Chicago Surface Lines turn out trailers for use in handling Chicago crowds. These were the same in appearance as others bought from a car builder—in this case Brill.

1922 and 1923 saw an interesting home-built development. Not satisfied with single truck Birney cars, CSL designed a short, double truck car mounted on maximum traction trucks and built a total of 46, along with one single truck experimental somewhat larger than a Birney. These one-man cars served the lightly traveled lines in outlying areas.

1923 saw more locally-built cars, including 69 which were part of a total of 169 steel cars built to replace cars lost in a disastrous car barn fire. The other 100 were turned out by Brill and McGuire-Cummings. A number were designed to haul trailers.

Another shared batch consisted of 100 cars—50 built by CSL and the 50 from Lightweight Noisless mentioned earlier. These were equipped for multiple-unit operation, which CSL seemed to prefer to the use of trailers.

Throughout the period the shops turned out small quantities to replace cars destroyed or for experimental purposes. The latter included a single articulated car which was not repeated.

Then, after a break of four years, a final shop-built group emerged in 1929. These were a new (for Chicago) design, with a front entrance-center exit arrangement. Termed Peter Witt cars for the Cleveland transit official who originated the design, 34 were built by CSL. Brill and McGuire-Cummings made up the rest of a batch of 100.

With this order, company car building ceased, with following orders of PCC's coming from St. Louis and Pullman-Standard.

Shortly after Chicago wound down its car building program the Third Avenue Railway System in New York City started one. This large system was perhaps best known for its conduit-operated lines in Manhattan, but it also served the Bronx and lower Westchester County with a fleet of aged convertibles, single-truckers built in the 1920s, ancient cast-offs from other New York City lines, used cars built in the 1920s from as far away as Michigan, and what were probably the most modern conventional cars ever to be built in the United States.

It is these last that concern us here.

In the 1930s New York decided that street cars were obsolete and should be replaced with buses. The Third Avenue System, with considerable sums invested in cars, track, and other assets, devised a plan which would allow street car operation until the maximum economic life of the existing plant was achieved. A major feature was the use of existing assets to construct new cars to replace some of the early 1900s Brill products then in operation.

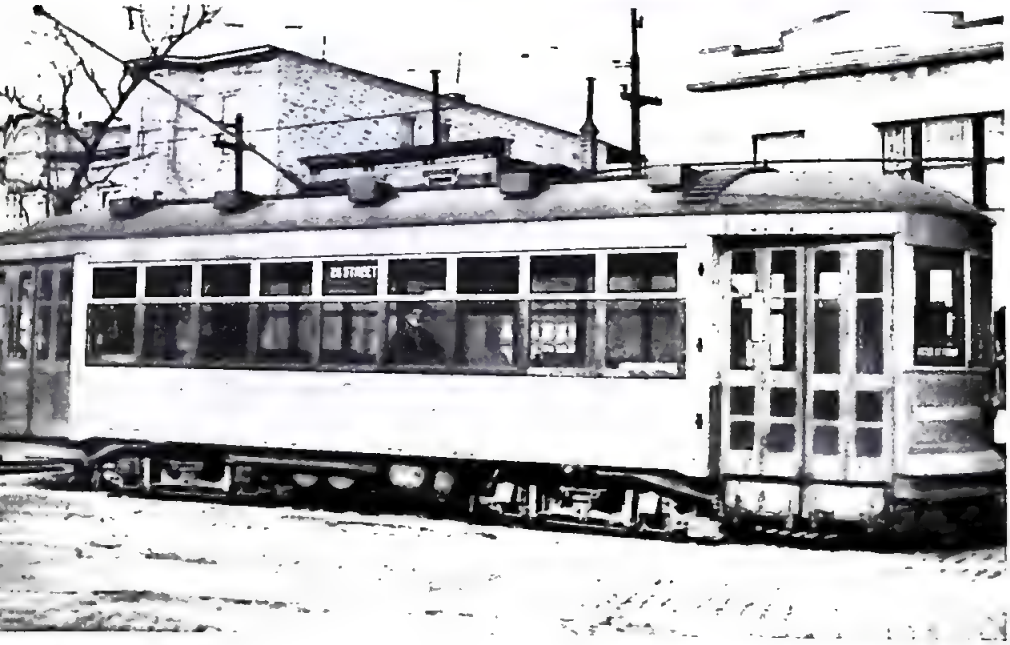
Beginning in 1934 they first rebuilt 100 single truck cars dating from 1914-15 and 1924, turning out modern-appearing arch roof, steel cars of conventional pattern by lengthening the carbodies and mounting them on Brill 77E type trucks built from Brill 39E

*The Light Weight Noiseless Electric Street Car Company was formed to market cars built in the TCRT Snelling Shops. Tennessee Electric Power bought some for use in Nashville and Chattanooga. TEP 138 is 14 years old in this 1940 Chattanooga photo.*

*One of the first batch of cars to be built by an operating Chicago company was 1480, turned out by Chicago Surface Lines predecessor Chicago Union Traction in 1900. Some survived as work equipment until 1958.*

*The last group of cars built by CSL was of the front entrance-center exit Peter Witt design. The triple pairs of doors were a typical Chicago design feature which carried over into the PCC's which would be the next large group of cars to appear on Chicago streets. 3341 was a CSL product.*

*After rebuilding a number of single truck cars into almost all-new double trucks, Third Avenue Railway System of New York City began building from scratch. 555 was built of aluminum in 1937 and served on the Broadway line in Manhattan. Lacking trolley poles these cars operated on conduit tracks. After the line was abandoned, these cars went to Sao Paulo, Brazil, in 1947.*



*Chicago Surface Lines tried out the light, single truck Birney car, didn't like it, and turned to this one man, double truck "safety car" substitute built at home. 3092 was the prototype for 40 more.*

*Most Chicago-built cars followed a more or less conventional pattern—double ended, arch roofed, steel-sheathed sides. 1730 was built in 1923 and was designed to pull a trailer. Chicago Surface Lines also built many of their trailers.*

*The straight tongue-and-groove sides, rounded ends, and doors cut partially into the ends at an angle mark this Duluth car as a TCRT product. TCRT also built for several other companies.*

*Twin City Rapid Transit 1230 was built at the 31st Street facility in 1907. The massive appearance typified the TCRT product, though 1230 has been modified to a double ended configuration for use on a shuttle run.*

maximum traction trucks from older equipment. At the same time several cars were built from, as a modeler would say, "scratch."

In 1935-37 another 100 cars were turned out, this time completely new, although the trucks were as on the previous rebuilds.

In 1936 Brill delivered a new light weight double ended Peter Witt type built of aluminum. TARS then built 49 duplicates in their own shops using aluminum and another 25 using steel. It was these cars which many associate with the Broadway line in Manhattan.

Then in 1938 and 39 they built 60 more new steel cars, reverting to the older design with all doors at the ends. These cars had resilient wheels and rubber-in-shear springing, approachinig the PCC in comfort and silent operation. With the abandonment of the New York lines in the late '40s and early '50s, some of these cars were sold to such diverse places as Bombay, Sao Paulo, Lima, and Vienna. Others were scrapped in New York.

The last lines to operate were in Yonkers in Westchester County, and the cars in service there were considered for use in the Newark subway, but used PCCs from Minneapolis were selected instead.

Several of the Newark cars the Yonkers veterans would have replaced were themselves home-builts.

New Jersey's Public Service system, which blanketed the northern half of the state, had several hundred cars which had been built in the company shops. Between 1908 and 1923 a total of 249 cars were turned out, most to a conventional deck roof pattern. Many identical cars were bought at the same time from the Cincinnati Car Company. Sources vary as to which cars were built by whom. One indicates that cars were numbered as received, without regard to source; others say that they were numbered neatly in blocks according to the builder. Perhaps one day someone will do a properly researched history of the company. Until then we will remain in doubt.

But no matter which source built them, they were sturdy and reliable. Twenty were rebuilt in 1933-34 for service in the subway and lasted into the fifties, when the PCCs arrived.

On the west coast, the Market Street Railway (and its predecessor United Railroads of San Francisco) was a major builder.

Following construction of a pair of sightseeing cars at the turn of the century, United Railroads began in 1911 to produce in earnest with 24 car bodies mounted on trucks from scrapped equipment. The frames also came from scrapped equipment. Some could be traced back to the cable car era; This batch of cars was built to a classic design also traceable to the cable car. The California car was characterized by a closed section and one or two open sections, which allowed passengers to take advantage of the mild climate. Street cars generally had an open section at each end, with the closed section in the center. Virtually all cars to be built in San Francisco followed this pattern, although most were eventually closed in to one degree or another.

As originally built, the design had a major flaw. Unlike cars of conventional design, where the end platforms were lower than the main portion of the car, the California cars at first had "flush" platforms. Boarding passengers had to mount perhaps three steps, compared to the one or two on other cars. This was awkward, but what was more important, it also slowed loading.

In 1913 the company purchased 65 cars from American Car Company of St. Louis of a design which was to typify San Francisco street cars until after World War II. Squat and massive in aspect, they used the California design, but had drop platforms reducing the passenger's ascent to one step from the street and another inside the car.

These were followed by an experimental lightweight car built by the company in 1915. It was mounted on a pair of experimental trucks with 24-inch wheels instead of the 33-inch ones generally in use. The trucks were the result of experiments taking place in Pittsburgh and were bought there. The car was similar in design to the American Car products, but much lower to the ground. Unfortunately, the small motors which made possible the smaller wheels proved inadequate for San Francisco hills, and the experiment was not duplicated.

Instead, the company reverted in 1918-1919 to the older flush platform

*Continuity of styling of TCRT-built cars is apparent from these two photos. Deck roofed 2000 was the first experimental lightweight car built. Turned out in 1916, it made use of a radically new truck design featuring much lighter construction and inside frames. Except for the arch roof, car 2017 is very similar in appearance, yet it was built 12 years later, using an improved truck design. It was one of the last cars to be built by TCRT.*

design, building 22 cars using frames from scrapped equipment, including, once again, cable cars. Given the much lighter weight which characterized cable cars, it is surprising that they could handle the greater weight of the electrics.

Then in 1920 the Elkton Shops really came into their own. From that year until 1933 over 250 bodies resembling the 1913 cars were constructed. Some were mounted on trucks from scrapped equipment; others on trucks bought new. Frugal Market Street Railway, operating in competition with the city-owned Municipal Railway and under perennial threat of city takeover, also used much salvaged electrical and other items.

These cars were more lightly built than the 1913 cars, but were a mainstay until after municipal ownership finally came in 1944.

To the south the Los Angeles Railway is difficult to classify as far as car building is concerned. In one sense it was among the most prolific in the country, but it turned out only one large batch completely from scratch.

LARy's South Park Shops over the years were responsible for rebuilding virtually all of the company's vehicles in response to the changing demands of the service. It rebuilt cars of predecessor companies to the California-type "Huntington Standard" design. And then it rebuilt them again in response to changing conditions—and then perhaps again. Cars built new to the Huntington design were also rebuilt and rebuilt. One suspects that in many cases virtually nothing remained of the original car.

It was also the habit of the company to buy car bodies and then install trucks and air and electrical equipment at South Park.

So the shop crews of South Park were thoroughly qualified to build cars from the ground up. In 1923 they got their chance. Two years earlier the first of an order of 250 steel cars from St. Louis Car Company began to arrive. They constituted LARy's "H" class. Before the last of the batch arrived, the company announced that it was going to construct copies. There was a difference—the home-builts were to be of wood. The truss rods gave them away, but otherwise there was little to distinguish the "K" class from the St. Louis products.

These cars were to have been the first in a series of cars built in Los Angeles, but economics intervened, and only 60 were built. The last of the class rolled out in 1925. Working in wood, the shops built well. The cars lasted until 1955.

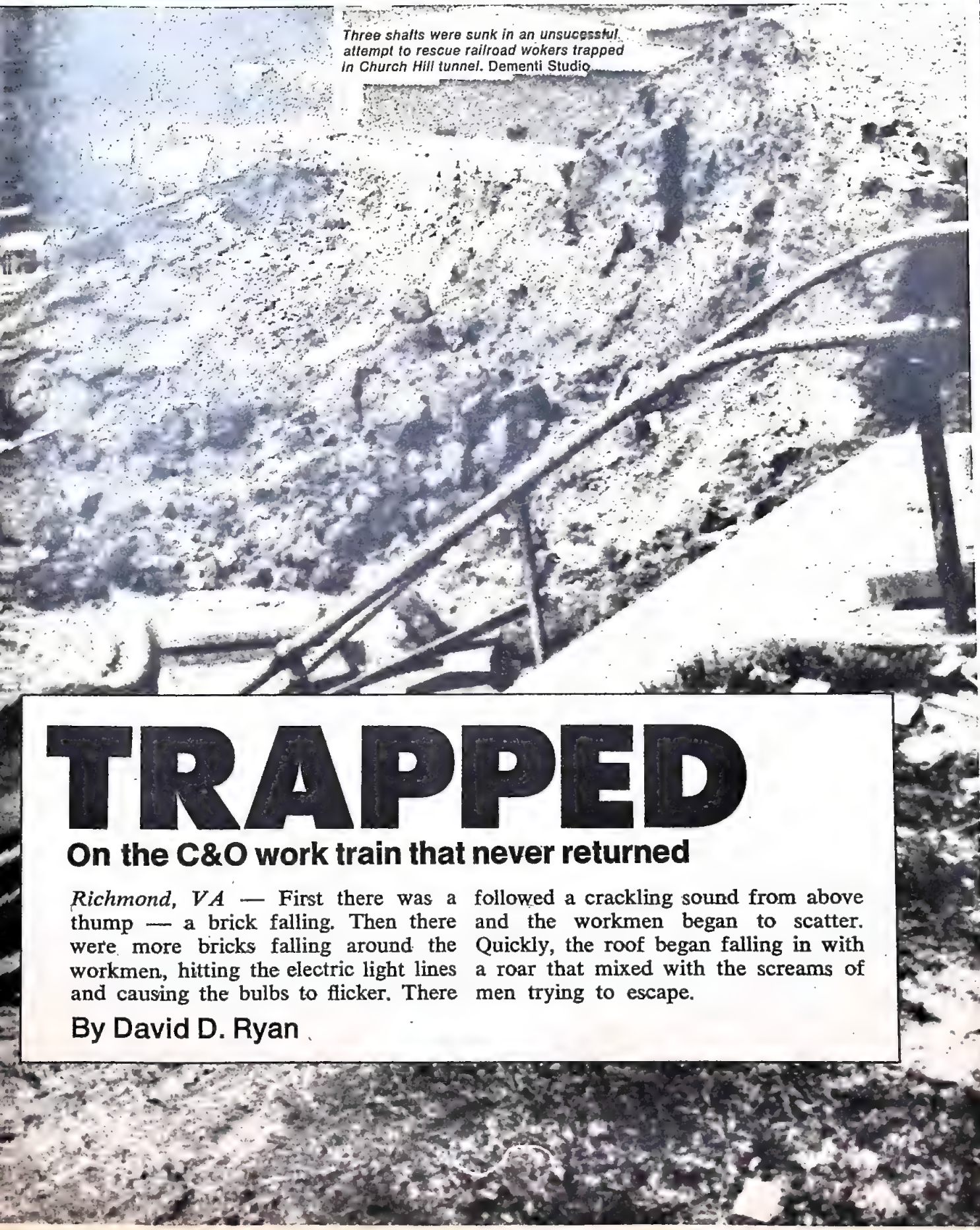
Los Angeles had one of the two major narrow (42-inch) gauge systems in the U.S. Denver had the other, and it, too, tried its hand at building its own.

After extensive rebuilds early in the century, the Denver Tramways turned to the local Woeber Carriage Company for its car needs. Then between 1922 and 1925 the company turned out 50 cars of a front entrance-center exit design, the last new cars to appear in the city. Built as two man, they were soon converted to one man service, and two were later mounted on standard gauge trucks for interurban service to Golden. The shops also built several steeple cab freight motors in both narrow and standard gauge, which, after abandonment, were sent to South America.

A few other cities turned out batches of homemade cars. Portland, Oregon; Atlanta; and New Orleans all did at one time or another. In Canada, the private company that operated the Toronto system until the 1920s built much of its equipment, and a careful reading of the Electric Railway Journal will show that other companies on the North American continent did the same.

It was in the nature of things in that less sophisticated time that many master mechanics and superintendants of rolling stock, given a wrecked car or trucks from a wornout piece of equipment and a reasonably competent carpented and blacksmith shop, took a hand at turning out their version of the ultimate trolley. The result might be a body obviously copied from a Birney and mounted on a Brill 21E truck or a hybrid workcar design, but it pleased the local eye and met a need.

It remained, however, for companies such as TCRT, Third Avenue, Chicago Surface Lines, Market Street Railway, or LARy to bring production of the homebuilt to the peak of perfection.



*Three shafts were sunk in an unsuccessful attempt to rescue railroad wokers trapped in Church Hill tunnel.* Dementi Studio

# TRAPPED

## On the C&O work train that never returned

*Richmond, VA* — First there was a thump — a brick falling. Then there were more bricks falling around the workmen, hitting the electric light lines and causing the bulbs to flicker. There followed a crackling sound from above and the workmen began to scatter. Quickly, the roof began falling in with a roar that mixed with the screams of men trying to escape.

By David D. Ryan

*Workers take a break during rescue attempt to reach trapped railroad workers from western entrance to C&O tunnel.* Dementi Studio

*Railroad tracks still extend into the eastern end of the tunnel that ends southeast of 29th and Grace Streets. About 50 yards beyond portal tunnel is sealed with concrete.* David D. Ryan

Two rusting railroad tracks led eastward from North 18th Street below Richmond's historic Church Hill and then stop. A few yards beyond is a semi-circle cement wall with the date 1926 carved on it.

Groundwater seeps between the cement and stonework and leaves long brown stains on the cement that seals a former railroad tunnel that caved in nearly 55 years ago in Richmond's East End.

The cement also forms a tombstone for several railroad workers and a work train still buried in the tunnel after it collapsed on October 2, 1925.

It was midafternoon and a Chesapeake & Ohio RR work train was being operated in the tunnel by engineer Thomas J. Mason. It was raining and the tunnel offered shelter for the workmen.

Mason stopped his locomotive 100 feet in the tunnel from the west mouth and prepared to drop his ten-car load. Also in the tunnel was a crew of laborers putting concrete rings in the 52-year-old structure to shore it up. They had been at work for two weeks, ever since some houses above on Jefferson Park settled and there had been an outcry about the old tunnel.

One news account quoted Ben Mosby, a mason's fireman, aboutw hat then happened.

"They were getting ready to back out when a brick fell. I yelled, 'Watch out . . . she's acoming in.' Then there was an awful crash, and steam squirted all over me. I scrambled out and found an opening and began to crawl."

Mosby, the account continued, apparently dropped off the locomotive and crawled east under the engine and cars, where the cave-in had not yet reached, then was helped to the east end of the tunnel.

"Some of you fellows phone my wife," he said. "Tell her I was one of the men who got out. Tell her I'm not hurt bad and not to worry."

Another workman in the tunnel recalled that "men passed me screaming and fighting. Some of them yelled that they had knives and would cut anybody that got in their way. Others were praying — you never heard such praying . . . they lost direction in the darkness . . . butted their heads into the side walls, fell over the ties and rails and knocked each other down . . . it was like being in the bottomless pit."

The ground in Church Hill is blue marl and clay, slippery stuff full of shells left when the land was under water in prehistoric times. There were several cave-ins during construction of the tunnel, costing several lives.

When the Chesapeake & Ohio Railway opened its steel viaduct across Shockoe Valley and Main Street station in 1901, the tunnel became unnecessary, and scaffolding was put across the ends to close it off. But it served as a shortcut for small boys from the east side of Church Hill into the city. The tunnel ran about a mile under Church Hill and ended in a ravine near the city's Fulton Bottom section.

*The date the western entrance of collapsed tunnel was closed still shows on concrete wall that is stained by groundwater that seeps out between wall and stonework.* David D. Ryan

In the early 1920s, the tunnel was reopened long enough to shore it up with timbers, apparently to keep it from settling, and drainage ditches were dug along the base of the walls.

Then in mid-September of 1925, the crews went in again. Some accounts from the time say they were enlarging the tunnel to permit passage of the larger equipment of the day and thus expedite traffic; others say they were shoring it up because of the sinking ground above.

Whatever the reason, suddenly on October 2 there was a train buried in there, 100 feet from the west portal and about 60 feet underground and an unknown number of men.

Rescue parties started digging almost imediately. A steam shovel was brought to the hill above the western opening and started to scoop away from the slippery earth. Crews started in from both ends, digging with hand tools, shoring up the tunnel walls as they went, hauling the muck out on flatcars. The earth in the park above the the cave-in had sunk 20 feet, and from that and other measurements it could be estimated that 250 feet of the tunnel roof had collapsed.

The rescue work went on around the clock and engineers started digging three shafts from the top of the hill toward where they believed the locomotive was. The railroad company reported that a roll call of its laborers in the tunnel turned up only two absent, but others who escaped said 10 to 15 were still in there.

About 10 p.m., eight days after the cave-in, the men digging the middle shaft to the tunnel hit metal. Hurried digging showed the coupling between the locomotive and first flatcar.

The men cut through the flatcar floor and a man dropped through and found room to crawl under the locomotive. There he found the body of the engineer, Mason.

Nobody knew where to begin to look for the two laborers known to be missing. The continuing earth slides made further work to recover the train and equipment risky. The company gave up, boarded up the tunnel and abandoned it. They filled it with sand top revent further cave-ins, and plugged the entrances with concrete.

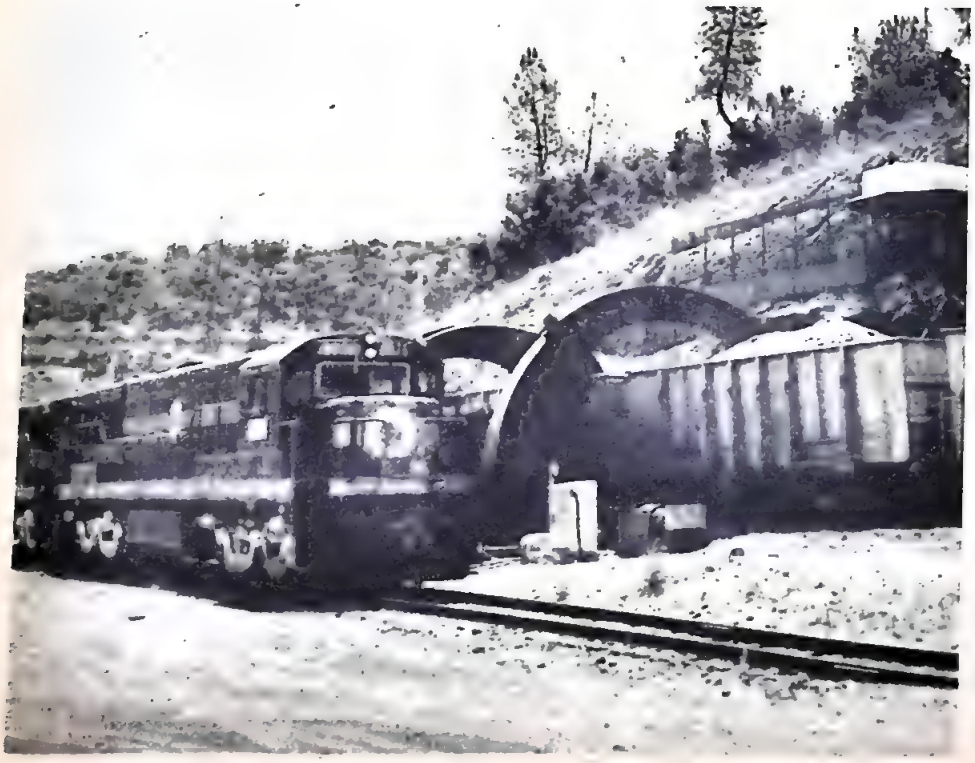
The official toll was four dead. Unofficially, the rumors continued then, and even years later, that other men were also trapped.

Since the cave-in, the earth above the tunnel occasionally has slipped and cracked in Jefferson Park, where children now play oblivious to the tragedy that occurred below nearly 55 years ago.

# THAT DAM RAILROAD

(Continued from page 21)

*About six weeks after this photo was taken two trains had a cornfield meet in this tunnel . . . which according to previous statements was "totally impossible."*



*Train returning light with empties while the inbound train is still being unloaded.*

with a cut of empties. The rotary dumper could sequence 45 times per hour for a capacity of 10,000 tons. From the dumper, fill material would be carried the last few hundred yards by conveyor belt.

From the dam site down river the single track followed the east bank in a twisting fashion then came upon the single tunnel, site of that traumatic accident, then came a siding. Immediately above Western Pacific's line relocation crossed on a bridge and at the siding's west bridge rails crossed to the river's west shelf on an open deck bridge. Opposite Oroville the single track stayed to the river's west side, crossed over again to the other bank on the middle bridge then strayed back again on the lower bridge within a few hundred feet. Soon it entered the so-called "borrow area" where fill was picked up. The other two sidings were located approaching the dumper and in the borrow area generally known as Thermalito.

Filling time was about ten minutes per train with ten cars at a time being loaded by pulling through a loading tunnel. A balloon loop brought incoming empty trains around to slip under the loading pile. Most of the material used in Oroville Dam came from the tailings left by gold dredges which for years worked the Feather River below town. A long conveyor, at times stretching to 7,000 ft., reached out for the fill material, periodically moving to a new location which necessitated moving the loading tunnel and adjusting the loading tunnel as well.

In response to its only major accident Oro Dam RR management had to scurry about to keep the railroad going. Four of the road's seven diesels were involved and one of them, the 8010 was badly smashed, while two others 8011 and 8016 were severely damaged as well. It was necessary to lease a couple of WP F units and experiment with different sized train combinations to keep things moving pending replacement of the regular units.

Generally, though, the specialized railroad that built Oroville Dam turned out to be a success.

There probably won't ever be many like it due to the unusual source of materials so close to the construction site. But this was one dam railroad that really worked.

*The loaded train approaches a set of empties which it will couple onto, then shove them ahead.*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(Continued from page 21)

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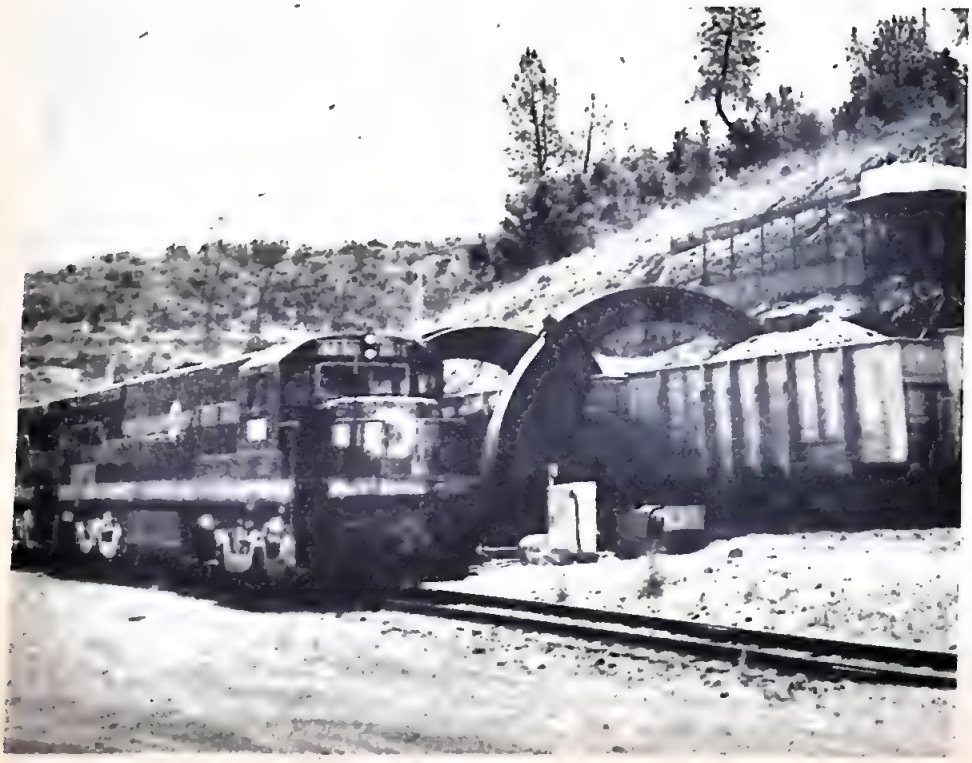

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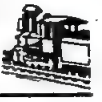

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*(Continued from page 5)*

*AMFLEET-STYLE* body shells will be used on 150 new stainless steel *long-distance cars* which Amtrak has ordered to speed the conversion of all trains to electrical head-end power. The order will consist of 125 coaches and 25 food service cars and cost $150 million! Amtrak is continuing to take delivery of coaches, sleepers, and diners in its doube-deck Superliner series which will operate only on routes west of Chicago because of tunnel restrictions.

* * *

*A NEW AEM-7 ELECTRIC LOCOMOTIVE* hauling an instrumented test car and three standard Amfleet cars achieved a speed of 125 miles per hour on a 13.3 mile section of track between Brunswick and Trenton, New Jersey. This locomotive, the first of 30 being built by the Electro-Motive Division of General Motors, will go into service in the NEC later this year. Amtrak recently ordered 17 additional locomotives similar to the original 30.

* * *

*THIRTEEN* major new *rail corridors* have been identified by Amtrak for possible development in a report prepared for the House Interstate and Foreign Commerce Committee. The scenarios, which make these corridors viable, feature trains operating at 79 to 110 miles per hour and fuel prices of $2.50 per gallon in today's dollars. It was projected that these corridors could support from three to twelve trips daily:

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Chicago-Detroit
Chicago-Milwaukee-Twin Cities
Chicago-St. Louis
Miami-Jacksonville
Los Angeles-Las Vegas
Los Angeles-San Diego
New York-Buffalo
San Jose-Oakland-Sacramento
Seattle-Portland
Fort Worth-Dallas-Houston-San Antonio-Fort Worth
Washington-Richmond

* * *

*THE SECOND* daily *San Joaquin* was added between Bakersfield and Oakland on February 3, 1980. Patronage of the single train operated previously had been declining at about the fastest rate in the system, but the added schedule flexibility for passengers from the second train may help to improve performance on the route which happens to be a favorite of state politicians.

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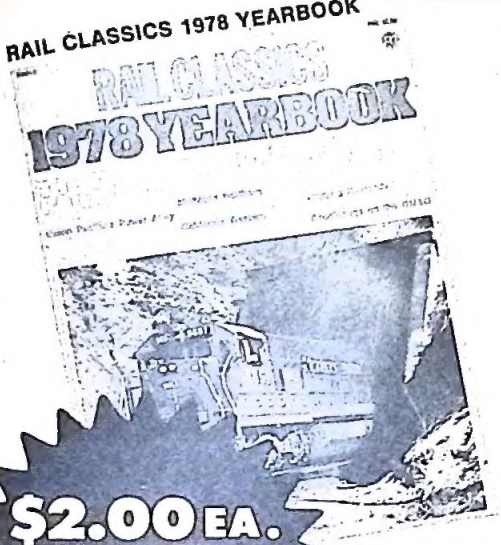


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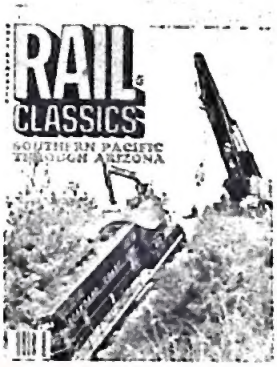


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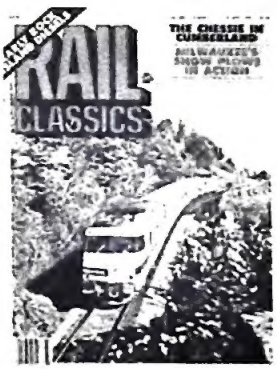


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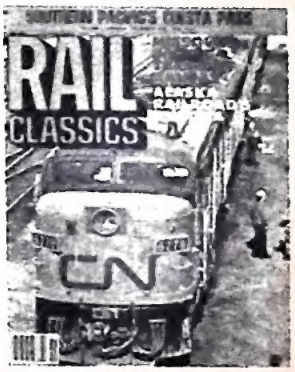


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# Transit Observer

By Ed Stauss

*Muni Metro* has started operations in San Francisco. That's a system, under construction for many years, which puts streetcars under Market Street, the main retail and cultural spine of San Francisco. Part of the subway was constructed in conjunction with BART, Bay Area Rapid Transit, with the Muni tracks above the BART tracks. Four stations are in the combined portion, offering direct, underground transfers between systems.

Operating on the new Muni Metro are 21 Boeing Vertol cars, 71-foot articulated units seating 68 and able to carry a full load of 219 passengers. Service currently is only on the N line; next to join the system will be the K line and the remaining three lines will follow during the next 12 months. When the Metro service is fully implemented, 100 of the Boeing streetcars will be in service and San Francisco's old fleet of PCC cars will be available for acquisition by museums.

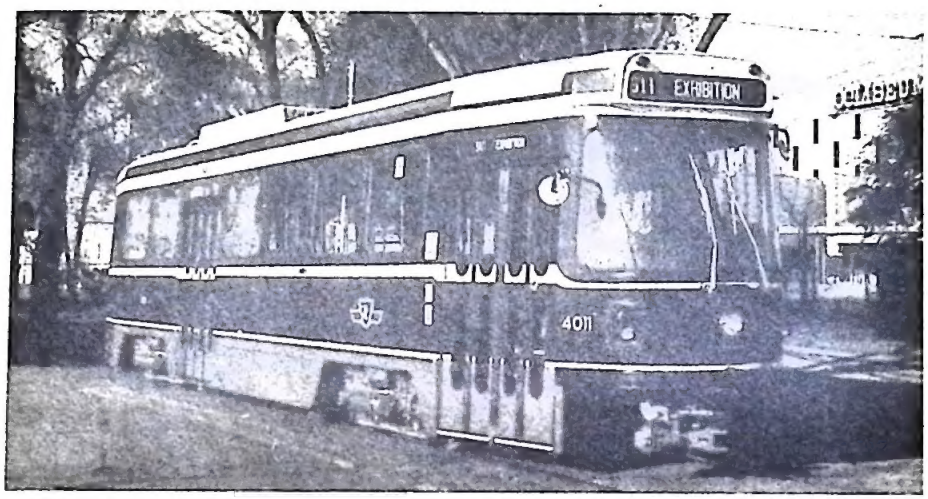
* * *

Cubic Corp., vendor of *automatic ticketing* machines for rapid systems in Washington, Atlanta and San Francisco, hopes they now have a cure for the frequent breakdowns and jams that have created many critics for their equipment. Several modifications intended to prevent money and farecards from jamming were demonstrated in Washington's Farragut West Station in March. Cubic thinks these changes will improve system reliability to 9 percent, but if it doesn't, Washington Metro officials are considering going back to tokens and turnstiles.

* * *

Three *Canadian light rail vehicles* from Toronto have been loaned to Boston's MBTA for in-service testing. MBTA believes the Canadian streetcars have been proven by usage in Toronto, thus eliminating problems associated with completely new designs. The cars feature large windows, fluorescent lighting, low-step entry and exit, forced ventilation and a smooth ride.

* * *




*CLRV streetcar at Toronto's Exhibition Loop.* R. F. Corley

Twenty-two of *Toronto's new CLRVs* (Canadian Light Rail Vehicle), will be equipped with pantographs for use on the 4.5-mile Scarborough line to open in late 1982. The remainder of the nearly 200-car fleet will use convention trolley poles. Designed in Switzerland, the cars are now being built in Canada by Hawker Siddeley with many modern safety and comfort features including an electrically-heated windshield to keep off the ice from Canada's cold winters.

* * *

*Buffalo's* light rail rapid transit line is under construction with five contracts currently in work. Nearly 600 jobs have been created by the effort to bring rail transit to Buffalo which will include eight underground stations.

* * *

A contract has been awarded to air condition 344 more IRT rail cars on the *New York City Transit Authority*. By summer, 1980, there will be about 750 air conditioned IRT cars in operation. Of the 6424 cars in the NYCTA fleet 2414 cars will be air conditioned by this summer.

* * *

*Pittsburgh's streetcar* fleet is going to be upgraded with the rehabilitation of 45 PCC cars which will operate along with 55 new LRVs to be ordered soon. The master plan is to build a subway in the congested downtown area for the stretcars and to replace the rebuilt PCCs with an all-LRV fleet after about ten years.

* * *

Trackwork on *Washington's Metro* is wearing out at a very fast rate. The outside rail of a U-turn into the New Carrollton yard has worn off over an inch in only fifteen months. Worst wear in revenue trackage is on the S-curve between Federal Triangle and Smithsonian which sees 20 six-car trains every hour during rush periods. Rail fastenings are breaking where anchor bolts were set in epoxy, keeping maintenance crews busy replacing them.

Washington is also suffering from a car-availability crunch. Cars sidetracked by shortages in repair parts are making it nearly impossible to schedule eight-car trains and most trains are running with only six cars. (Ron Deiter via Texas Division ERA)

* * *

Prices of new heavy rail cars are continuing to climb. Among the reasons are the fact that orders have been so irregular in this country that only one domestic builder, Budd, is still in business. Another problem is that every rapid transit facility operates by its own standards, requiring each contract to be a custom design. Seems like it's time for another President's Conference Committee meeting. The last one adjourned in 1934 was so successful that the resulting PCC cars are still operating in seven North American cities.

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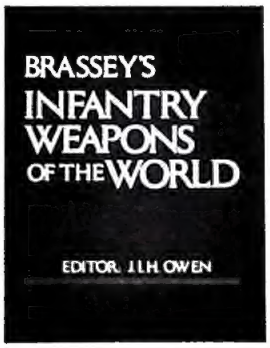


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